MODERN
PACKAGING
OCTOBER 1942
RECEIVED
OCT 19 1942
MIAMI UNIVERSITY
LIBRARY
PERISHABLE - RUSH
BIRDS EYE
FROSTED FOODS
WE DELIVER EVERYWHERE
CORN FLAKES
ALL-BRAN
GREEN GIANT
RACKERS

Canco Announces NEW FIBRE CONTAINERS

★ ★ ★

Revolutionary new lithographed containers look like metal . . . are made on existing can-making machinery with novel attachments added . . . and in most cases permit the use of present packing equipment.

★ ★ ★

AFTER MANY MONTHS of experimentation, the American Can Company has developed a revolutionary method for making cans with fibre bodies on machines *formerly used for the manufacture of metal ones!*

In this practical fashion, Canco will ease the container situation for many of you who manufacture dry products and whose supplies of metal containers have been curtailed through government order.

These new fibre containers will be suitable for most dry products, such as drugs, tobacco, cosmetics, spices, powders, etc.

Canco will share this new development with the entire can-making industry so that the demands of the trade may then be met during the war emergency.

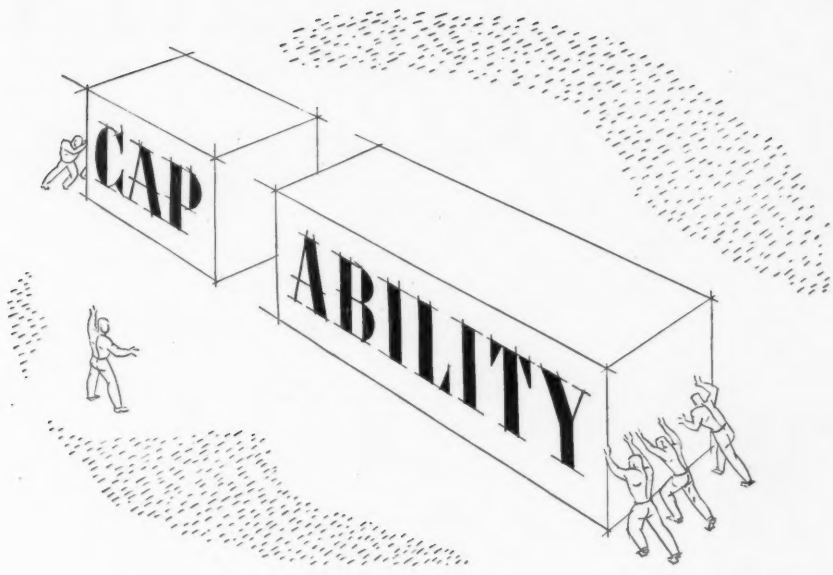
Canco customers may place orders for all-fibre cans up to the limit of production capacity on existing equipment. Fibre containers with metal ends will be supplied to the extent that black plate is made available for the manufacture of ends.

In announcing this new development, Canco believes it is only *one* instance in *one* industry of how the American way of free enterprise and mutual help pays off in wartime.

AMERICAN CAN COMPANY

230 PARK AVENUE, NEW YORK, N. Y.

"Largest Manufacturers of Metal and Fibre Containers"



CAP ABILITY AND CAPABILITY

ALL SCREW CAPS look pretty much alike. But *are they?*

For example: a slight variation in the pitch or shape of a thread can be the difference between a perfect-fitting, easy-to-remove cap and an obstinant, ill-fitting one. Liners, too, vary in resilience and imperviousness. And the finest lacquers, if improperly applied, may chip and become unsightly after a few weeks

The difference between *cap ability* and *capability* may be only in the way that you pronounce it. Or it may be the difference between the sun and the moon, packages that sell and packages that stay on the shelf.

The Phoenix C T Cap was the first standard, continuous thread cap. It was originated, developed and pioneered by Phoenix. Designed for discriminating packers, it spins on or off in a jiffy, seals perfectly, and lends new sales appeal to all glass-packaged merchandise. A familiar favorite—everywhere.

Have no doubt about this: *Cap ability* and *capability* are one and the same when you purchase Phoenix Metal Caps!

PHOENIX METAL CAP CO.

2444 West Sixteenth Street
CHICAGO

3720 Fourteenth Avenue
BROOKLYN

CHARLES A. BRESKIN, Publisher
CHRISTOPHER W. BROWNE, Editor
PEARL HAGENS, Managing Editor
IRIS VINTON, Associate Editor
NICHOLAS HUPALO, Art Director

Modern Packaging

OCTOBER 1942
VOLUME 16 NUMBER 2

NOVEMBER

Paper is one of the bulwarks of wartime packaging. Papers that take over the jobs performed in normal times by metal and other materials, must perform the protective duties of the materials for which they are pinch hitting. Remarkable progress is being made in the development of papers with grease and moisture resistant qualities to perform these tasks. If your product can be switched to paper, don't miss the review of the improvements and developments in protective papers appearing in November Modern Packaging.

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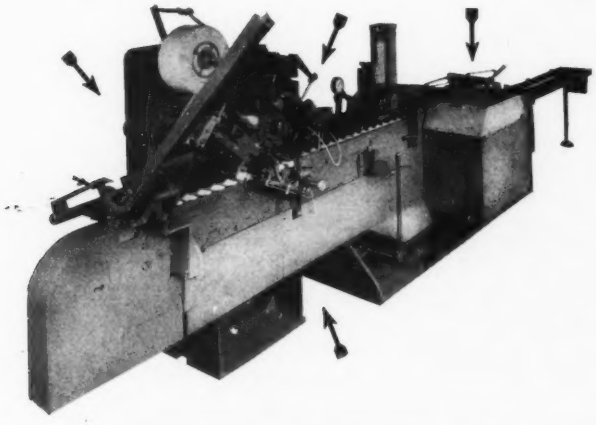
"baby"

THESE COPPER AND STAINLESS STEEL PARTS!



. . . these metals have "enlisted" for the duration

DO you want to keep your packaging equipment *in top-shape* 'til the war is won . . . especially those parts and mechanisms on your Redingtons* made *of copper base alloys or stainless steel*? Of course you do—these metals are hard to replace because they're sorely needed for tools of war.

The glue boxes, for example . . . boxes which must be made of brass and stainless steel because glue affects such metals as iron and ordinary steel.

Here are *some friendly tips* on the conservation of glue boxes that will make them last for the emergency.

1. Soak the box in water overnight. In the morning, dry carefully and lubricate thoroughly. This is important because dry glue acts like an abrasive. Tacky glue in moving parts causes strain and unusual wear.
2. Keep foreign particles out by keeping the box covered.
3. Arrange your schedule so that worn glue boxes can be repaired. Practically any box can be re-conditioned—bearings re-bushed—shafts replaced—rolls reground—scraper repaired or replaced. It isn't necessary to order a complete new box when the old one is worn. Order repair parts or send the box to us in Chicago for reconditioning.
4. Bronze and brass parts can be easily damaged; for example, using a pick or screw driver to clean out the machine. The operator should be alert to prevent serious jams and use care in handling machine parts.

There must be other ways you production men have of conserving copper alloy and stainless parts on your Redington machines. Pass them on to us and we'll pass your tips on to others. Every bit of these precious metals saved is that much more released for the planes, tanks, and ships needed to break the Axis.

** Redington machines are still being built under high priorities.*

F. B. REDINGTON CO. (Est. 1897) 110-112 So. Sangamon St., Chicago, Ill.

REDINGTON

PACKAGING MACHINES

FOR CARTONING • WRAPPING • SPECIAL PACKAGING

NO ONE HAS A GOOD MARKET FOR BAD MERCHANDISE +

Another good thought passed on by

KVP

MAKERS OF

Food Protection Papers

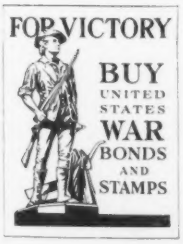
KALAMAZOO VEGETABLE PARCHMENT COMPANY

PARCHMENT · KALAMAZOO · MICHIGAN

One Shortage We Americans Will Never Know

MATERIALS may be scarce and grow scarcer. The vital needs of our armed forces may be great and grow greater. But America will never run short of courage, ingenuity, resourcefulness—the ability to see the job through no matter how hard it is or how long it takes.

In packaging, this spirit finds expression in many ways. In placing production for war above all other considerations. In the development of new materials for civilian needs. In the design of packages that require less of the materials now available.



Ritchie design and production experts are busy now seeking new ways to meet the packaging needs of present Ritchie customers. Would you like to share in the benefits of this work? We will gladly study your package to see if design changes or material substitution can insure you a steadier supply.

This service is offered to any established manufacturer without cost, without obligation and without thought of gaining immediate sales.

W. C. Ritchie AND COMPANY

8848 Baltimore Avenue, Chicago

SET-UP PAPER BOXES
FIBRE CANS
TRANSPARENT PACKAGES

NEW YORK DETROIT LOS ANGELES ST. LOUIS MINNEAPOLIS DENVER MIAMI

RATION K

Bags of special Riegel Paper are now being used for packaging Ration K. They meet U. S. Army specifications CQD-28C dated Aug. 3, 1942. If you are interested in this field, we believe we can offer samples and information of value to you. We specialize in meeting tough technical requirements in paper packaging.

3-ply LAMINATED

Replaces critical materials used for packaging food, drug and tobacco products. Superior moisture-vaporproof qualities. Available with additional lacquer coatings, thermoplastic if desired. Middle sheet variable to suit your needs. Procurable in sheets, rolls, bags, envelopes, or for lamination to other materials. Give us your problem, we will give you the facts.

RIEGEL PAPERS

20 YEARS IN 20 WEEKS

The "Bag-in-Box" is not new, but under the stress of wartime shortages, this packaging method has probably condensed twenty years of technical progress into as many weeks.

Many Riegel Papers, new and old, have contributed to this rapid technical progress of the Bag-in-Box, and you will find your folding carton manufacturer familiar with their qualities. Call him in now and present your requirements, or write us direct if you wish.

BAG -IN- BOX

—for Prompt Delivery

WPB Specifications for packaging Ordinance General Supplies (May 7, 1942) require special anti-corrosive, grease-proof wrappings for packaging many metal parts.

Riegel has a complete line of papers that meet these specifications and that *can be delivered promptly* from central points throughout the country.

Write for samples and Technical Bulletin No. 84.

ANTI-CORROSIVE Grease-Proof WRAPPING PAPERS

RIEGEL PAPER CORPORATION, 342 MADISON AVE., NEW YORK, N. Y.

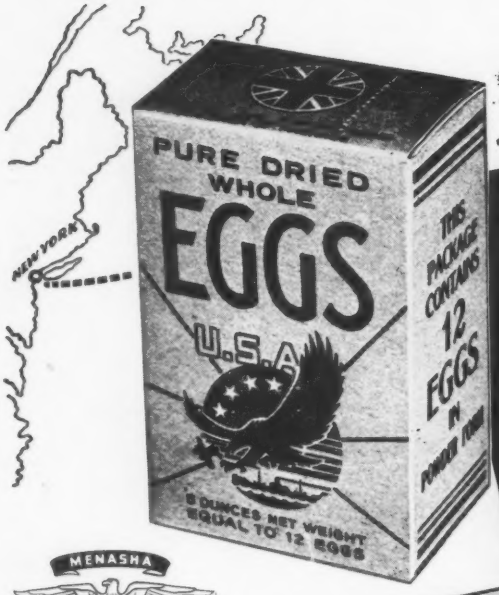
"CEL-O-SEAL" BANDS PROTECT—AND CONSERVE—THE CONTENTS OF PACKAGES...

▶ **TODAY** when Conservation is vital to the nation's war program, small "Cel-O-Seal" bands make an important contribution. On wine, drug and medicinal packages, they secure closures firmly in place; hence—

1. Keep the product in, safe from evaporation, and
2. Keep destructive or harmful influences out.

"Wind-O-Band" seals—the kind made for distilled spirits packages—provide this protection, too; and, moreover, protection of U. S. Government Tax Stamps.

"Cel-O-Seal" also "tops off" glass packages attractively, provides individuality—and often a "second label"—for the bottle or jar that wears it.



APPROVED 5-OUNCE PACKAGE FOR DRIED EGGS

Holds equivalent of 1 dozen eggs — water repellent — moisture-proof — light-proof — vapor sealed. Meets required Lend-Lease specifications. Furnished in several grades of board suitable for wax-dipping or over-wrapping after filling.

Send for Booklet —
"MENASHA WARTIME PACKAGING"

MENASHA
WARTIME PACKAGING

Includes these typical protective packaging developments:

5-ounce Cartons for Dried Eggs

★

Bag for Dried Eggs, 14 lb. unit

★

Bag for Frozen Eggs, 30 lb. unit

★

Bags, Cartons, Papers for Dehydrated Foods

★

Grease-proof and moisture-proof papers for wrapping ordnance supplies. (Grades A and B under Methods 1 and 2.)

APPROVED PACKAGE FOR RATION "K"

A heat-sealing bag made of specially laminated glassine and cellophane. Air-tight—highly resistant to moisture-vapor—neutral color for non-reflection of light. Menasha also manufactures the Ration "K" carton suitable for over-wrapping or wax-dipping.

OTHER PROBLEMS?

Packaging food? Drugs? Chemicals? Metal parts? If moisture-proofness, grease-proofness and absolute protection are major problems, we welcome an opportunity to solve them. Manufacturers and convertors of papers, cartons, bags. Experienced technical personnel available for immediate study of your packaging requirements.

MENASHA

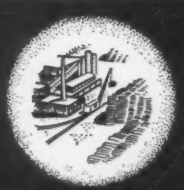
WAR PRODUCTS DIVISION

THE MENASHA PRODUCTS COMPANY, MENASHA, WIS.

Division of Marathon Paper Mills Co.

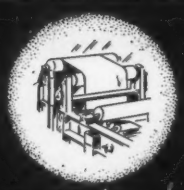
Menasha PRODUCTS

Northern Timberlands

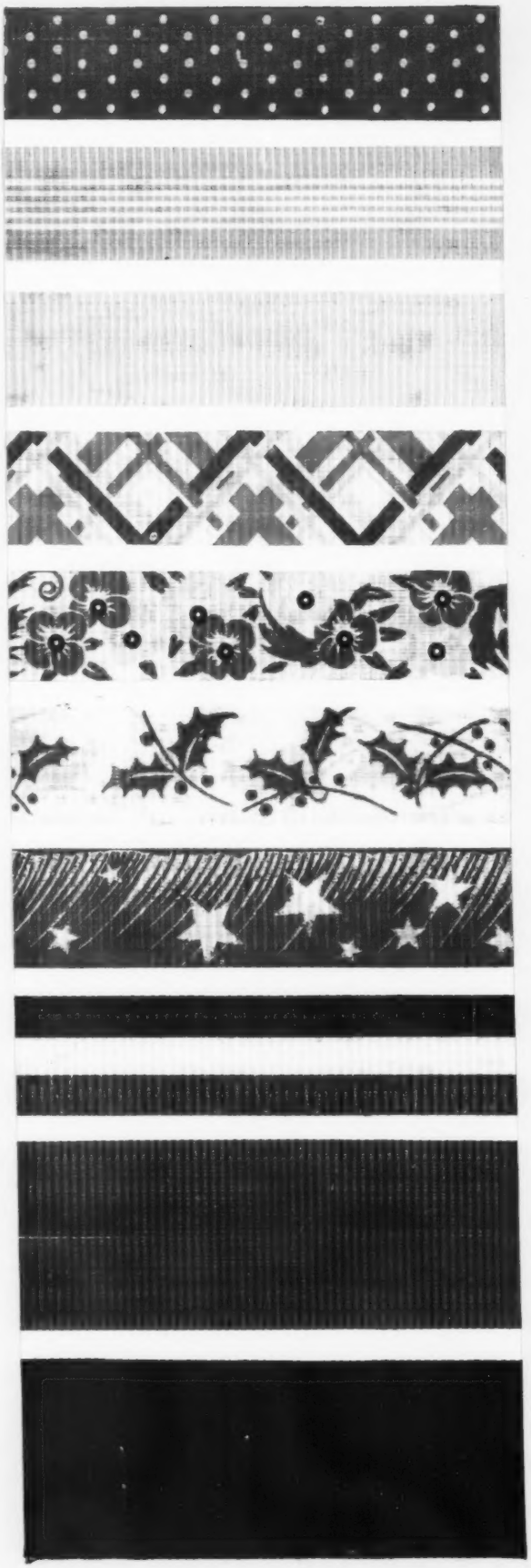

Pulp and Paper Mills

Experienced Technical Staff

Package Engineering and Design


Complete Conversion Facilities

A COMPLETE SERVICE IN PROTECTIVE PACKAGING



Appearance
Quality
Variety
Availability!

Ribbonette
REG. U. S. PAT. OFFICE

is made from materials not restricted by war time conditions. A very few items have been changed or eliminated but the quality has not been impaired and these attractive cotton tying materials are available to manufacturers, wholesalers and retailers in a rich variety of color and pattern.

Many packaging problems can be solved easily and successfully thru the application of Ribbonette.

Won't you tell us about your problem and let us submit suggestions?

CHICAGO PRINTED STRING CO.

2319 Logan Blvd.
Chicago, Ill.

225 Fifth Ave.
New York, N. Y.

JOIN US IN HELPING UNCLE SAM MAKE VICTORY POSSIBLE!

On and on they go leading the way to Victory! Sailors, soldiers, marines! Tanks, subs, ships, guns! Each day when added reinforcements arrive, Victory comes a little closer! And that's where we on the Home Front come in! The fate of our boys "Over There" is in the hands of industry here. We, of the Sefton Fibre Can Co., know that every mother's son is depending upon us... and you can be assured we won't let them down! Join us! Help them ... Help America go on to Victory now!

SEFTON FIBRE CAN COMPANY

Plants — St. Louis, Missouri • New Orleans, Louisiana

DISTRICT OFFICES: Los Angeles, San Francisco, Denver, Tampa, Chicago, Des Moines, New Orleans, Boston, Detroit, Kansas City, St. Paul, Omaha, New York, Cincinnati, Cleveland, Oklahoma City, Pittsburgh, Memphis, Nashville, Dallas, Houston, Salt Lake City, Seattle

BETTER GLASS IS BORN HERE

...because this man is never satisfied

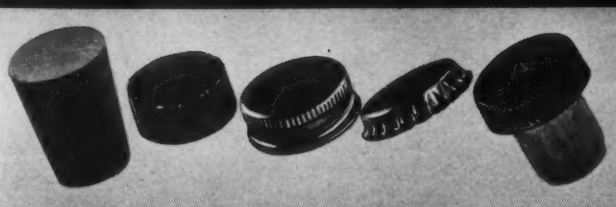
THIS is Dr. Robinson. He is testing a sample of glass in a machine called a viscosimeter. It's a complicated, precise mechanism, one that Dr. Robinson understands perfectly because he designed parts of it himself. It tells him things that have enabled Armstrong to make far better glass than ever before.

But Dr. Robinson is still not satisfied. He and the other highly trained men in the Armstrong's laboratories will never be satisfied with glass the way it is. That's why today's Armstrong's Glass is stronger, tougher, better-looking than yesterday's.

This constant urge to improve means better glassware for you. It is just as important to you as the modern precision machinery in Armstrong's plants, just as vital as the skill and experience of the men who run it. The urge to improve has made—and kept—Armstrong's Glass the top-quality glass.

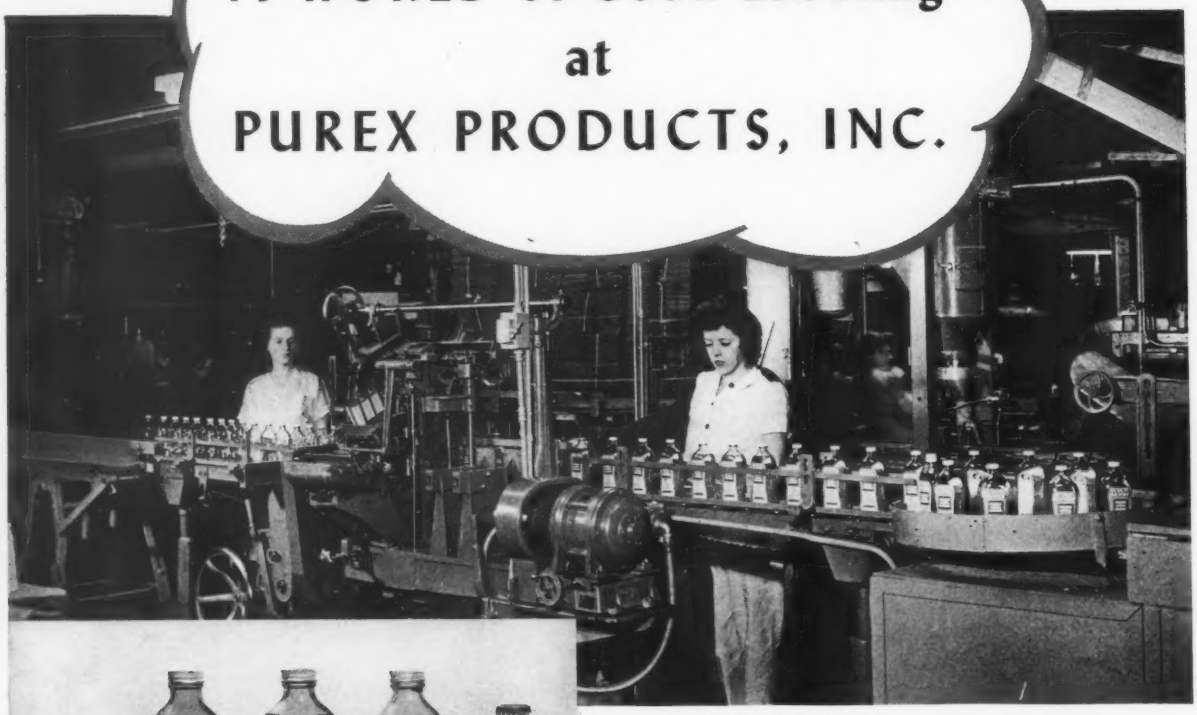
Armstrong's lines of glassware are complete and supplemented by a wide range of closures to meet your glass packaging needs. Write for complete details. Armstrong Cork Co., Glass and Closure Div., 916 Arch St., Lancaster, Pa.

ARMSTRONG'S GLASS



and **ARMSTRONG'S CLOSURES**

A WORLD of Good Labeling at PUREX PRODUCTS, INC.



A representative collection of bottles that are labeled at the Purex Products plant by the WORLD Automatic BEE-LINE Labeler. Note the variety of bottle sizes and shapes.

It's a WORLD Automatic BEE-LINE Straight-away Labeler. They're busy as bees at the Purex Plant so they rely on the *WORLD BEE-LINE* to meet their stiffest production schedules. And from all reports it's doing a "honey" of a job.

Containers of widely varying size and shape are smoothly and precisely labeled every day as they move straight through the BEE-LINE without stops, detours, jarring or jamming.

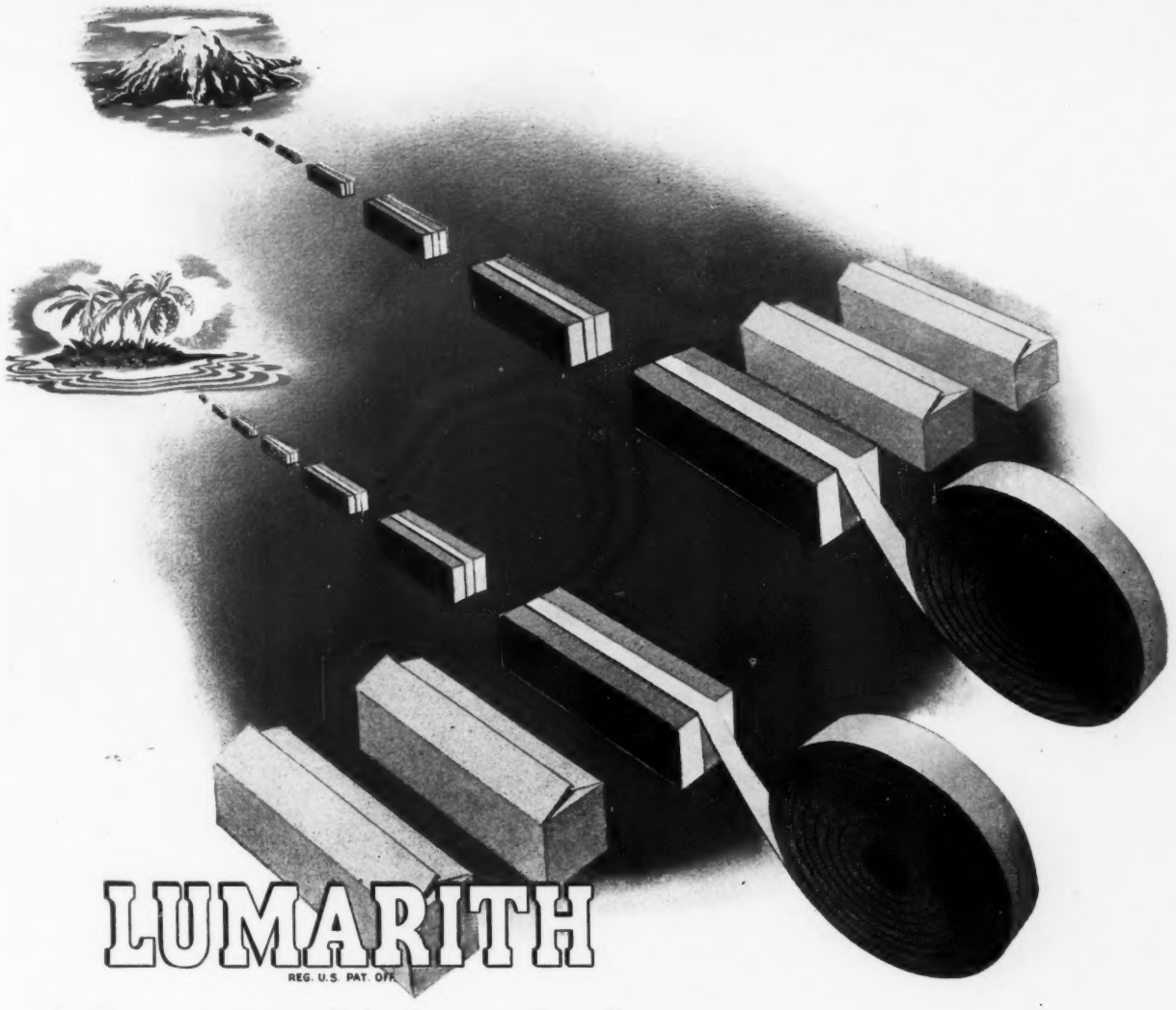
Purex can depend on efficient, economical production labeling from the BEE-LINE for many years to come. It is built to the same high standards of quality and precision that have earned for this complete line of Automatic and Semi-Automatic Labelers the widely held opinion that ***"you get the best labelers in the WORLD".***

ECONOMIC MACHINERY COMPANY

Builders of World Automatic and Semi-Automatic Labelers for Every Purpose

Worcester, Massachusetts

NEW YORK PHILADELPHIA PITTSBURGH CHICAGO SAN FRANCISCO DENVER LOUISVILLE
SALT LAKE CITY EL PASO SEATTLE PORTLAND LONDON MONTREAL TORONTO WINNIPEG
SPOKANE VANCOUVER SYDNEY, AUSTRALIA WELLINGTON, N. Z. SAN JUAN, P. R.



delivers 'em fresh at the front

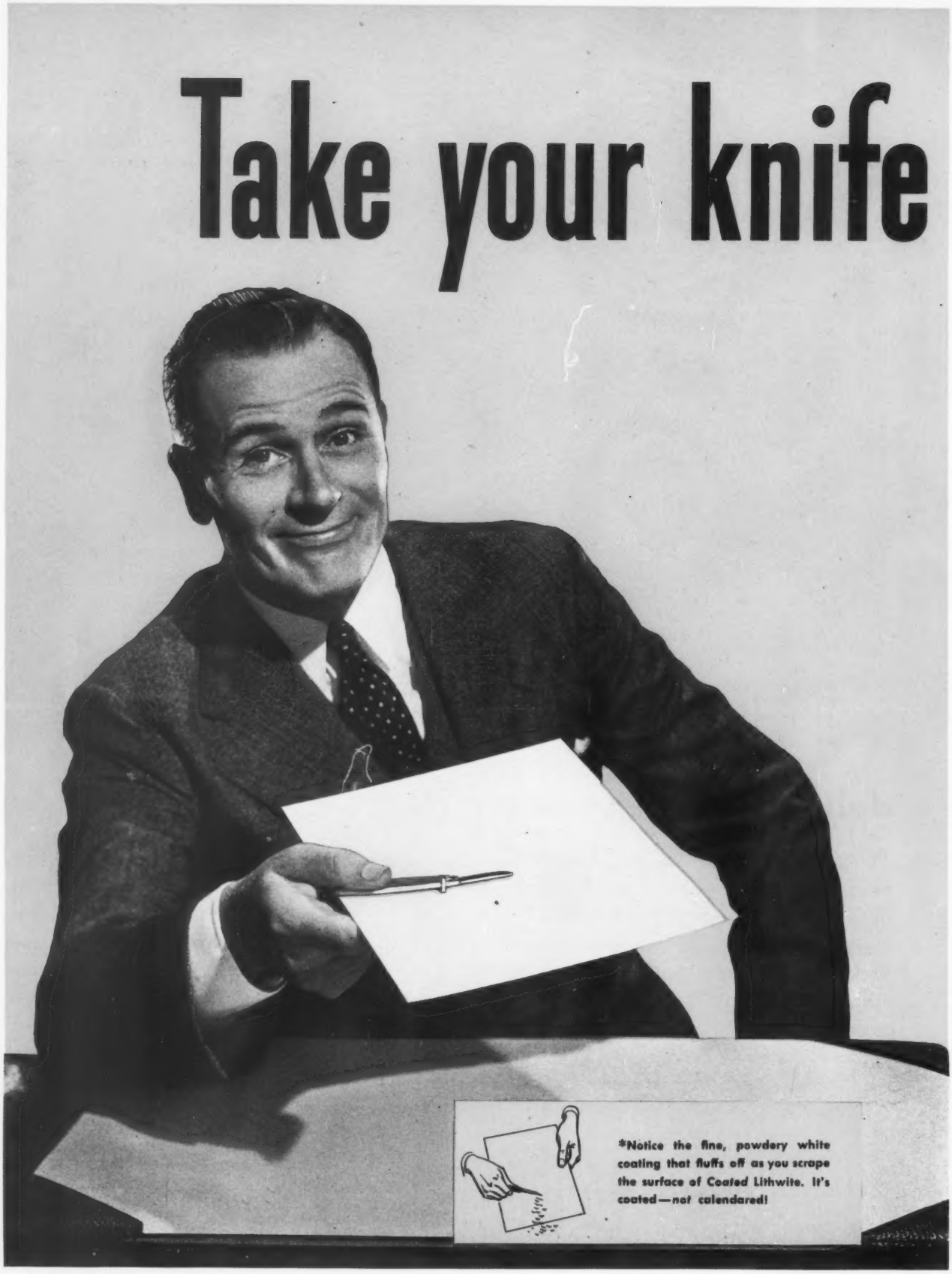
From Alaska to the tropics, army food packages meet all kinds of weather during transport under combat conditions. Waterproof boxes—with every seam sealed with pressure sensitive tape backed by Lumarith—do the job of keeping the contents fresh in icy blizzards or warm rains. Another example of how Lumarith, the transparent "glamor" packaging material, meets rigid U. S. military requirements for toughest front line service.

Lumarith is water-proof, grease-proof, germ-proof. It protects against poison gas and mold —does not shrink, dry out or become brittle— is not affected by extremes of humidity or temperature. The Army and Navy can use these qualities in boxes, drums and cans with Lumarith-laminated linings—in Lumarith-backed tapes— in Lumarith tubes for drugs, medicines and foods. The list is as long as packaging ingenuity makes it.

the first name in plastics

CELANESE CELLULOID CORPORATION

A Division of Celanese Corporation of America—180 Madison Avenue, New York, N. Y.


Take your knife
*Notice the fine, powdery white coating that fluffs off as you scrape the surface of Coated Lithwite. It's coated—not calendared!

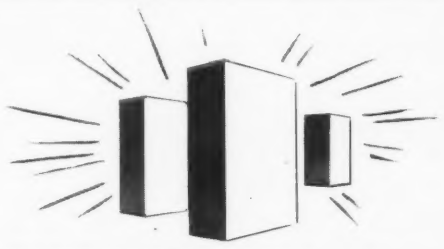
...and SCRATCH*

You'll see it's coated...and if you're scratching around for a way to cut carton costs, let us quote you on Coated Lithwite

YES, it's hard to believe that a mineral coating could be successfully laid on a boxboard at high speed—but get a sample of *Coated* Lithwite in your hands and be convinced. For here is a genuine *coated* board that's smooth, velvety and bright. Here is a board with a surface so uniform and hard, so free from "chalkiness" that inks lay more smoothly, come up brighter, half-tones and type print crisply without a fill-up or without a smudge.

As for cost — that's another hard-to-believe fact about *Coated* Lithwite. In these days of price ceilings, when many manufacturers are scratching around to cut costs, this modestly-priced *Coated* Lithwite is proving a means to really worthwhile savings.

Ask us to send you printed *Coated* Lithwite samples for inspection. Then let us quote you on your needs so you can see what we mean by "really worthwhile savings."

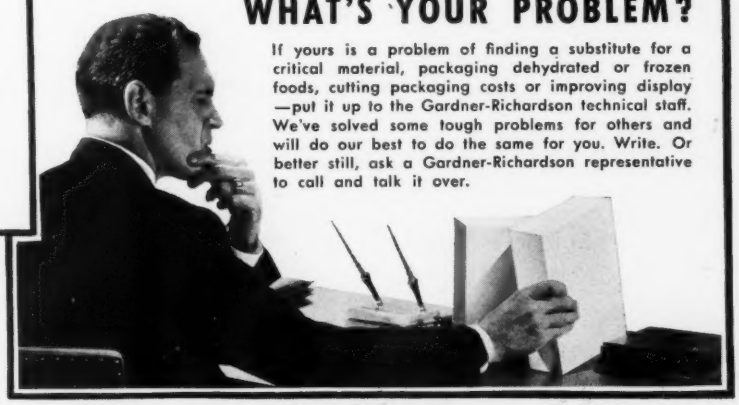


PRE-WAR BRIGHTNESS. No critical materials are used in the manufacture of Coated Lithwite. It's a quality board — a board that won't lose its whiteness when on display.

BETTER PERFORMANCE. Coated Lithwite scores without cracking. Seals more positively in high-speed, automatic filling and sealing machines.

WHAT'S YOUR PROBLEM?

If yours is a problem of finding a substitute for a critical material, packaging dehydrated or frozen foods, cutting packaging costs or improving display —put it up to the Gardner-Richardson technical staff. We've solved some tough problems for others and will do our best to do the same for you. Write. Or better still, ask a Gardner-Richardson representative to call and talk it over.



Sales Representatives in Principal Cities: Philadelphia • Cleveland • Chicago • St. Louis • New York • Boston • Pittsburgh • Detroit

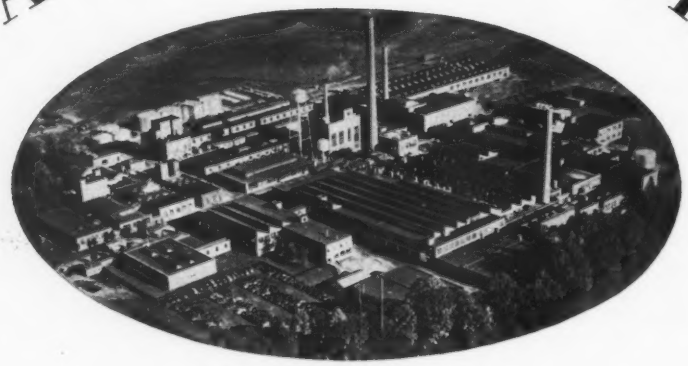
GARDNER-RICHARDSON — FROM PULP TO FINISHED PRODUCT — ENGINEERED PRECISION

The GARDNER-RICHARDSON Co.

MIDDLETOWN, OHIO

Manufacturers of Folding Cartons and Boxboard

SYLVANIA* CELLOPHANE



PLANT—FREDERICKSBURG, VA.

for Conservation

WHILE emergency restrictions and government demands are in effect there must be the utmost conservation of materials in civilian and industrial use. To-day, under the most exacting conditions, SYLVANIA cellophane is proving its value in new uses and in replacing shortages of other types of packaging materials.

Following are some of the features of SYLVANIA cellophane which recommend it for packaging requirements. It meets rigid specifications for

Strength	Insect proofness	Moisture vapor proofness
Durability	Insolubility in water	Gas proofness
Transparency	Economy	Lack of taste
Air proofness	Flexibility	Non-corrosive properties
Lack of odor	Lightness in weight	Resistance to changes in temperature

SYLVANIA cellophane offers conservation and economy.

Buy United States War Bonds and Stamps

SYLVANIA INDUSTRIAL CORPORATION

General Sales Offices: 122 E. 42nd Street, N. Y. Works: Fredericksburg, Va.

Branches or Representatives:
ATLANTA, GA. . 78 Marietta Street
BOSTON, MASS., 201 Devonshire St.
CHICAGO, ILL. . 111 N. Canal Street
DALLAS, TEX., 809 Sante Fe Building
PHILA., PA. . 260 South Broad Street

SYLVANIA CELLOPHANE

Pacific Coast:
Blake, Moffitt & Towne
Offices & Warehouses in Principal Cities
Canada:
Victoria Paper & Twine Co., Ltd.
Toronto, Montreal, Halifax

* "SYLVANIA" IS A REGISTERED TRADE MARK FOR CELLULOSE PRODUCTS MANUFACTURED BY SYLVANIA INDUSTRIAL CORPORATION

What the Pueblos found out about packaging

THE early Pueblo Indians of our great Southwest were the original cliff dwellers. They solved their "packaging problem" by living up in the air.

Pueblo cliff dwellings hugged the sheer cliff sides, backed up against towering walls. Enemies couldn't attack from the rear—the back of the house was protected. So was the front of the cliff dwelling, because the only access was up the cliff side, where the Pueblos could keep close watch.

But this double protection from human enemies was not all the Pueblos did. They found out that their "package," exposed as it was to the sun, wind, and rain, needed still more protection. So they covered their cliff dwellings with a mixture of burned gypsum, to protect them from erosion. That's how they improved their "package," and made it a real success.

Improving packages is an important part of Continental's service. We know that packages which are sturdy, good-looking, and specifically designed to do a job, help to make the sales curve zoom. That's why Continental has become known as packaging headquarters for industry.

Today, millions of cans for America's civilian food supplies, for Army, Navy rations, for beleaguered nations, are rolling out of Continental plants. So are other vital things for Uncle Sam's needs. All are packages to protect America!

Looking into the future we see many new packages—ideas which must be held until another day. But, for those who are planning ahead, we offer the services of our packaging engineers, research men and designers. They will be glad to work with you.

CONTINENTAL CAN COMPANY

Packaging Headquarters for Industry

What will be the PACKAGE of the FUTURE?

The package of the future will be the package that best meets *all* these 10 important points:

1. Protects against light, heat, and dirt.
2. Does not chip, break, or tear.
3. Is adaptable to *highest* speed filling operations.
4. Is economical to pack, ship, and handle.
5. Light weight, compact, no waste space.
6. Moisture and vapor proof, impervious to temperature changes.
7. Easy and convenient to display, sell.
8. Available in wide variety of sizes, shapes, styles (over 500).
9. Offers maximum convenience and safety in consumer usage.
10. Permits high processing temperatures, certain hermetic sealing.

These points made the metal container *first* in packaging. If there ever is another package that has *all* these qualifications, we'll be making it!

KIMBLE'S NEUTRAGLAS (N-51A GLASS)

BROTHERS UNDER THE SKIN . .

These three containers are all made of the same material — Kimble NEUTRAGLAS — a fact vitally important to users of molded bottles as containers for parenteral solutions.

Until Kimble's development of NEUTRAGLAS bottles, only serum vials and ampuls were available in glass of such high chemical resistance. Now Kimble offers molded glass containers of the *same high-resistance glass* (N-51A), assuring the same protection against corrosive and solvent action as the finest ampuls and serum vials.

For Assurance

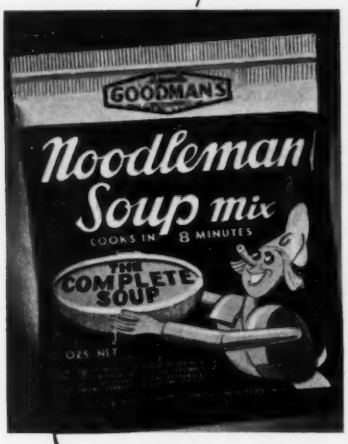
• • • *The Visible Guarantee of Invisible Quality* • • •

KIMBLE GLASS COMPANY — VINELAND, N. J.

THERM-O-TOP

A NEW CLOSURE FOR ALL STYLES OF PAPER BAGS

HEAVY DUTY BAG 5 LB. CAPACITY . . . DUPLEX NATURAL KRAFT CONSTRUCTION. THERM-O-TOP REPLACES METAL TIN TIES.



SMALL COUNTER DISPLAY PACKAGE 2½ OUNCE CAPACITY. OUTER BAG MULTI-COLOR PRINTED FOR ADVERTISING MESSAGE. INNER CELLOPHANE BAG PROTECTS PRODUCT.

AUTOMATIC STYLE BAG, DUPLEX CONSTRUCTION, WHITE BOND WITH GLASSINE LINER . . . THERM-O-TOP CLOSURE ON FULLY AUTOMATIC CLOSING EQUIPMENT.

TRANSPARENT HEAVY WAXED GLASSINE. THERM-O-TOP ELIMINATES NECESSITY OF METAL STAPLES AND SPEEDS PRODUCTION.

SMALL FLAT BAG OF DUPLEX CONSTRUCTION WITH GLASSINE LINER. THERM-O-TOP AFFORDS POSITIVE SIFT-PROOF SEAL.

THOMAS M ROYAL & COMPANY

PHILADELPHIA U S A
BRANCHES IN PRINCIPAL CITIES

It's Patriotic to pack in paper!

WOMEN SHOW SPEED WITH ACME STRAP-APPLYING TOOLS

STEELSTRAPPING SIMPLIFIED WITH ONE-PIECE ACME STEELSTRAPPER

Throughout the war industries, the Acme Steelstrapper justifies its reputation as the fastest strapping tool ever devised. It's making history, too, as an extremely easy-to-handle tool. And in the many plants where women are taking over the strapping operation as wartime needs call men to other duties . . . Steelstrappers are making their advantages count in faster, safer shipments.

Operators like the easy way this one-piece, automatically seal-fed tool performs. Unnecessary motion and excess fatigue are eliminated. Acme Steelstrappers tension, seal and cut the strap with one stroke of two levers.

Acme Steelstrap meets all Federal strapping specifications and is used to reinforce all types of shipments, packed in all types of containers. Acme Steelstrap and equipment may also help you speed up your shipments. Write, phone or wire.

Action a-plenty in this war emergency shipping room of a well-known food producer. Acme Steelstrap is applied with Acme Steelstrappers. RESULT: Delivery dates are met and shipments are damage-free.

This operator and the Acme Steelstrapper make a team that's a headache for the Axis. Here they are in the act of making a vital shipment, "Bound to Get There."

NEWS FLASHES FROM THE PRODUCTION FRONT ACME FIELD MEN REPORTING

Over rail and wave, war shipments are speeding to destination, safely and economically. Recommendations by Acme Engineers are helping to make this possible. The following excerpts are from actual reports, and we can quote hundreds of others:

MICHIGAN: " . . . located their difficulty with carload shipping. Made several recommendations. Will stay with them on next big shipment to see them through.

CALIFORNIA: " . . . went over some of the difficulties of aircraft loading. Suggested new packing method to cut damage and speed up shipment."

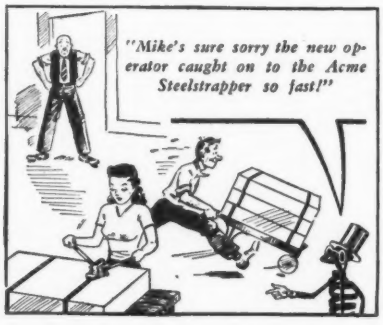
ACME *SilverStitchers* ASSURE FASTER AND EASIER CARTON STITCHING

" . . . we have doubled our production of stitched cartons and this would not have been possible without the use of your equipment and wire." That's the record the operator in the illustration above compiled with an Acme Silverstitcher and Silverstitch Stitching Wire. Together, they form a triple threat combination that slashed previous production records and cut costs at the same time.

Made in all standard and many special types . . . Acme Silverstitchers are extremely easy to use . . . low in cost . . . and sturdily built.

NEW ISSUE GIVES FACTS ON FASTER, SAFER SHIPMENTS

A new issue of Acme Process News with facts you'll want to know . . . about faster, safer and more economical packing and shipping. Mail the coupon for your copy, today.



"Mike's sure sorry the new operator caught on to the Acme Steelstrapper so fast!"

☐ Mail complete information on fast, safe and economical shipments of ..... *name of product* packed in ..... *type of container*

☐ Send me a copy of Acme Process News.

Name .....

Company .....

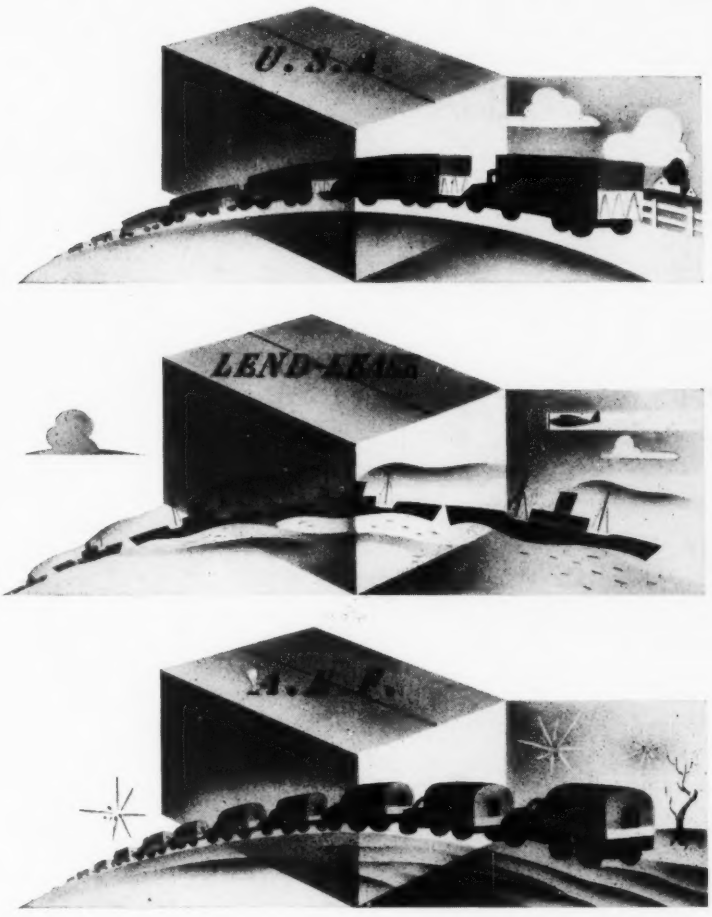
Address .....

ACME STEEL COMPANY

2843 Archer Ave., Chicago, Ill.

MANUFACTURERS OF: STEELSTRAP, UNIT-LOAD BANDS, CORRUGATED FASTENERS, CARTON STITCHING WIRE, SILVERSTITCHERS, STRIP STEEL AND OTHER STEEL PRODUCTS.

★ PROTECTING GOODS FOR VICTORY ON ALL FRONTS ★



FOR protecting materials vital to victory against spoilage, shrinkage, breakage and waste on battle and production lines, paperboard has become of major importance. It has also replaced materials made precious by scarcity...has increased transportation loads by saving space and weight.

We at Gaylord are mighty grateful that our peacetime "know how" in protective paperboard packaging has fitted us for wartime service.

To you who are turning out victory goods, we pledge our all-out cooperation. Call on us. We'll stretch every facility to supply you with Gaylord packages built to meet wartime conditions on any front.

Gaylord

BOXES • BOARD • CARTONS • BAGS • PAPER

GAYLORD CONTAINER CORPORATION

St. Louis, Missouri

OFFICES IN PRINCIPAL CITIES

★ BUY MORE WAR BONDS ★

What are you doing with that EIGHTH DAY?

We all have time to do Imagineering even though we're working seven days a week to win the war.

Making the start on deciding where your business is going to head after this thing is over doesn't require stockholders' meetings, nor even board meetings, nor even committee meetings.

Best way to make your beginning is to look at the future in the large. The war will end. So will this production race on war materiel. Millions now employed at that kind of work will need to keep on working at *something* useful. Other millions will come home from wherever, needing useful and peaceful employment.

In the large, therefore, anyone can see that *new things to make* is a prime need for peacetime.

That makes everyone's individual responsibility clear and direct.

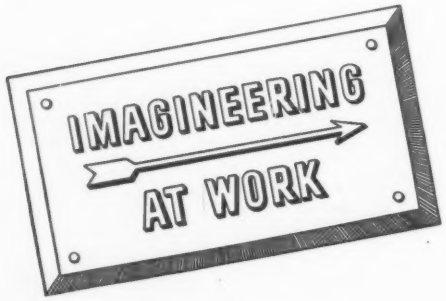
In the eighth day of thinking time everyone has at his disposal, he must produce new ideas for new jobs. He *must* let his imagination soar and engineer it down to earth.

He must, or else—

We believe this deeply at Alcoa. We are using our eighth days that way. We mean that no man shall be out of a job when this thing is over for want of *try* on our part right now.

. And if you suspect that some of the results of our future-looking on aluminum would fit into your own Imagineering, let's compare notes for future reference.

ALUMINUM COMPANY OF AMERICA, 2129 Gulf Building, Pittsburgh, Pennsylvania.



ALCOA ALUMINUM

Worth looking into!

No "butts" about it, glass is a solution to your packaging problem that will more than suit you! It's plentiful...and the use of it will help America conserve steel, tin and tinplate.

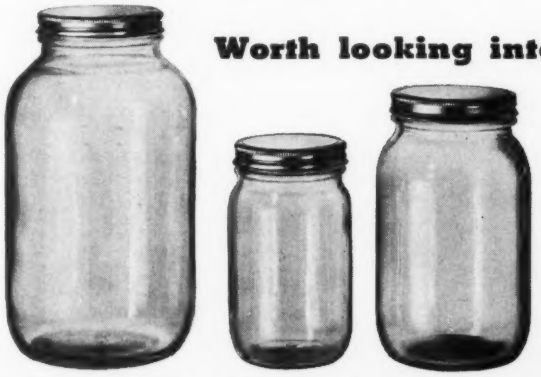
There are other reasons, too, why so many manufacturers are using Anchor Hocking glass. Many new developments are responsible for the array of excellent advantages it gives you today. But that's not all. Anchor Hocking also gives extra benefits at no extra cost...the services of its experts in engineering and in biological and chemical research. These men know their business inside out, can be helpful to new users of glass in many ways, including simplifying and expediting change-over.

Today—call in your friendly Anchor Hocking packaging engineer. Ask him about the Anchor Hocking complete package—container *and* closure, made for each other by one company, available from a single supply source. And remember—whether you want the complete package or the containers and closures separately, your best buy is Anchor Hocking!

ANCHOR HOCKING

GLASS & CAPS

ANCHOR HOCKING GLASS CORPORATION • LANCASTER, OHIO



Worth looking into! *The new Anchor Hocking Economy Jar*

Excellent for mayonnaise, salad dressing, peanut butter, preserves, olives, apple butter and numerous other products, Anchor Hocking economy jars, shown wearing the Anchor Improved C.T. Cap are available in a complete range of popular sizes. These jars are tough and light... inexpensive to ship... provide maximum eye and buy appeal. Samples on request.

Anchor Improved C. T. Cap... Pitch of cap thread and glass container thread matches throughout their entire length, gives better, tighter seal. Absence of interference between cap and container threads makes cap easier to spin off or on. Fine knurls, cylindrical side walls and neatly turned wire edge provide better appearance.

INSIDE NEWS

OCTOBER PREPARED BY NATIONAL CAN CORPORATION, NEW YORK, N. Y. 1942

Modern Metal Lithography

BY W. N. MISURACCA

Director of Lithography, National Can Corporation

The decoration of metal packages is basically a lithographic process, modern offset lithography being in fact an offshoot of metal lithography.

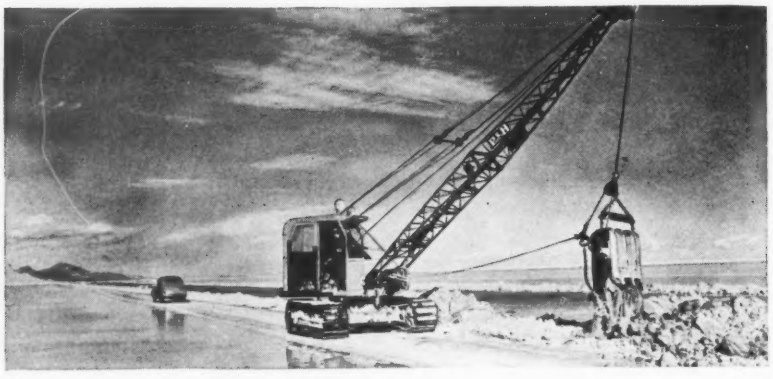
Lithography was formerly regarded as being based on the antagonism between water and grease, but modern research has considerably altered that viewpoint. It can now be said that lithography is not necessarily dependent upon the antagonism between grease and water, but rather on the lack of miscibility between any two substances. The fact that water is still used in the lithographic process as one of the unmiscible substances is because it is easily obtained at practically no cost.

It is this newly accepted theory that has made possible the enormous progress in the use of the photo-mechanical method of reproduction. When used in conjunction with natural color photography, this method gives us a new conception of the possibilities of decorating packages in the future.

Persistently—and unsung—scores of research laboratories are seeking the answer to many everyday problems in packaging. As a result of these combined efforts, a new lithographic printing plate of stainless steel has been developed. It offers definite advantages over the old plates which were made of the softer metals, zinc and aluminum. The stainless steel makes possible a higher speed in lithographing and a considerable improvement in the lasting quality of the printing plate and in the quality of the work itself. Unrelenting research has also produced lithographic inks which possess extraordinary brilliancy and resistance to fading. In some cases, the time required to dry these inks, when applied on a metal sheet has been reduced from the orthodox time of about twelve minutes to three or four seconds.

Today, however, many of these new developments have of necessity been held in abeyance. But a glimpse into the future reveals that one day the can making industry will have finishes which will rival enamels in hardness and appearance. These finishes will possess a phenomenal resistance to various products and will go far toward making a metal container the ultimate in packaging.

Creditable though the accomplishments of the can making industry have been in the past, we can look to the future with even greater expectations of success in the decoration of metal containers. Offset lithography, to which the can manufacturers have contributed so much, will establish new standards of excellence and durability after the war. (207)



Plenty of Salt for Everybody

America need never fear a shortage of salt. While it is being mined or taken from the sea or brine wells in but a few states, with Michigan producing the largest share, it is believed to be almost everywhere. The Great Salt Lake in Utah is often called the world's greatest source. The photo shows a dragline building brine evaporating beds or ponds on the Great Salt Flats. The briny water is pumped into these beds where it evaporates and forms crude salt which is then refined. Most of the salt from this region is produced in this way, which is known as the solar process. Today, salt is playing an important role in war factories. Salt tablets prepared with dextrose, taken orally, are a preventative of heat fatigue—heat cramps and sickness—caused by excessive sweating. Medical authorities say that sweating robs the human body of essential salts which must be replaced to maintain worker efficiency. (208)

Soap Spray Kills Japanese Beetles

One of Japan's more destructive gifts to the United States, the Japanese beetle, may be eradicated by a recently patented spray. The spray contains soap, rosin soap, corrosive sublimate and nicotine. The soaps not only act to emulsify the components so that they may be sprayed, but also supplement the destructive power of the poisons by drying up and clogging the insects' breathing tubes. The spray contains: rosin, 10 lbs.; lye, 1 lb.; fish oil soap, 1 lb.; corrosive sublimate, 1 lb.; nicotine sulfate, 1 oz.

The first three ingredients are boiled in 10 gallons of water until the mixture turns black; the corrosive sublimate and nicotine sulfate are then added in 20 gallons of water. For spraying fruit trees, hardy shrubs, grass and weeds, the mixture should be diluted with two parts of water. For beans and other delicate plants, dilute with three or four parts of water. (209)

According to a recent magazine article, claim has been made that there are 4,000 shades of red, and it is stated that the United States Bureau of Standard recognizes "2½ times" that number. Take your choice!

(Advertisement)

BY NATIONAL CAN

OCTOBER PREPARED BY NATIONAL CAN CORPORATION, NEW YORK, N. Y. 1942

Tannin and Gelatin Clarify Apple Juice

Methods of clarifying apple juice with tannic acid (tannin) and gelatin solutions have been worked out in Canadian research. The two materials are dissolved in water to make separate stock solutions. Trial amounts of these stock solutions are then added to samples of the apple juice, first the tannin solution and then the gelatin solution. The least amount of gelatin to give the desired clarification is selected, and quantities for adding to commercial batches are worked out from the results of the sample tests. Quantities of materials and directions for making and using the stock solutions are available. (210)

A Tight Case Delivers The Goods

Distributors of canned foods don't like to receive them in shipping cases that are split or broken. Shipping cartons that don't stand up usually contain dented cans, and dented cans don't sell readily. Approaching the matter of damaged shipments from an objective viewpoint recently, several canners have found that they were buying shipping containers that were too large. Investigation in the warehouses of one prominent canner indicated that fibre board cartons bought from one of several carton manufacturers gave thoroughly satisfactory service. These particular cartons were supplied in dimensions 1/16 inch less in length and width and ⅛ inch less in height than the cans themselves. The manufacturer contended that only by an interlocking or overriding of the seams of the can could a tight package be obtained. The canner found this contention entirely correct. (211)

Canned Butter Keeps Indefinitely

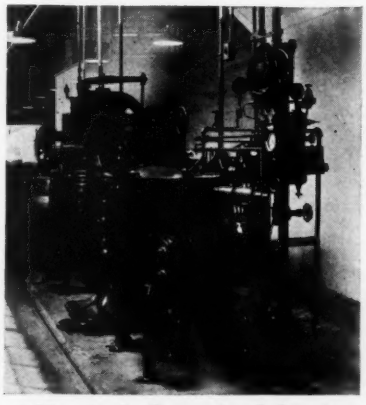
Lack of refrigeration on ships or in storage warehouses need not keep the dairy industry from supplying "butter" to the armed forces and civilian populations in tropical countries, according to the United States Department of Agriculture. Pure butteroil and skimmed milk powder can be shipped to tropical countries, held for a year or more, if desired, and then made into good butter with the aid of a little cold water, according to the Bureau of Dairy Industry. The Bureau has recently perfected a method of preparing pure butteroil and packaging it in 2-lb. tin cans so that it will keep almost indefinitely. For large shipments, metal oil drums are considered ideal containers, but wooden kegs are being accepted because they contain no critical materials. (212)

Hormone Sprays Help Save Sugar

Cooperation between growers and canners might help offset shortage of sugar, according to reports on the use of hormone sprays and ducts. In tests, where they were used, it was found that in nearly every case the acid content of the fruit decreased and the sugar content increased. Such fruits would require less sugar for processing. Other advantages also accrued from the use of the hormone sprays, notably fewer drops from fruit trees. (213)

"Research Is Organized Thinking"

National Can Corporation Puts Laboratory Theory Into Everyday Practice



A View in the Processing Laboratory

This complete canning equipment, reduced in size, serves to establish the important connecting link between laboratory theory and sound commercial practice in the canning of foods. Problems of heat penetration, new product compositions, effects on various lacquers and cans made from substitute plates are studied here. (214)

Prolific American female cockroaches raise an average family of 163 offspring during an adult lifetime of less than one year, according to recent studies of the family life of cockroaches. In some cases reproduction occurs in unmated females. Others continue to reproduce for a period of several months to a year after a single mating.

Technical Topics

VEGETABLES — It has been found that blanching of vegetables enables a greater weight of such materials to be filled into cans. But it has little effect on the pressure developed in the cans, provided the cans are heated to a high temperature before the cans are closed. The color of vegetables is not appreciably improved by blanching, but the texture and flavor of certain varieties were better. (215)

QUICKSILVER is now being commercially rectified to a purity of 99.99995 percent by a large American manufacturer of electrical equipment. Chief use of the highly purified mercury at the present time is in power rectifiers, particularly in plants refining magnesium and aluminum. (216)

SERPENTINE SUPERPHOSPHATE is finding application as a fertilizer material in New Zealand in place of ordinary superphosphate. The new material is stated to contain the magnesium and silica of the original serpentine in activated form. The activated silica in the mixture is a definite aid to plant growth. (217)

ERGOT PRODUCTION by artificially infecting rye with the fungus which forms the source of the material is being investigated in Canada. Improvement in agricultural methods which have diminished the amount of naturally-infected rye of late is responsible for the experimental program. (218)

ZINC DUST of high reducing power may be produced by direct electrolysis according to a description in a recent British trade journal. It is declared that the zinc tends to separate in powder form especially from solutions of zincate. (219)

COSMETIC OIL—An essential oil similar in odor to citronella and lemongrass oils is being produced in Kenya on an experimental basis. It is declared to be obtained from the leaves of Leptospermum citratum, a shrub or small tree of the Myrtaceae order which is found in the wild state in Eastern Australia. The oil is stated to be suitable for use in lotions of the eau de cologne type and in soaps. (220)

Every effort will be made to furnish additional information on these articles. Where such information is not obtainable, we will refer inquirers to the original source of the article. Write to National Can Corp., 110 E. 42nd Street, New York City. Please mention the number at end of article—also name of the magazine you saw it in.

(Advertisement)

THE PACKAGING CATALOG *Announces*

A NEW POLICY....

With the issuing of its 1943 edition, the Packaging Catalog will no longer be distributed through advertisers.

ALL COPIES WILL BE SOLD AT REDUCED PRICES

The price of the Catalog has been cut to $2.50 per copy, as against $5 in 1942—and this in a time of rising production and editorial costs. The publishers wish to make this book available to all firms needing it.

THE BOOK

The Packaging Catalog of 1943 will be a huge step forward along the line of these famous Catalogs.

It will contain much new factual information on the many substitute materials now flooding the market—with their physical and chemical properties outlined as the results of reliable tests under the direction of leading research men with no axes to grind.

It will be an up-to-date reference work on the entire panorama of packaging, of equal value to the novice and the expert. No one man could encompass the wealth of information between the two beautiful covers of the Packaging Catalog. This book is written and edited by hundreds of experts on the many phases of packaging.

It will contain well over one hundred articles covering every type of package, packaging material, packaging machine and packaging technique.

DIRECTORY

It will contain a guide to the suppliers of the packaging industries, the only complete and reliable directory of its kind. It alone represents months of careful analysis and compilation. It alone is worth more than the $2.50 the 1943 Packaging Catalog costs.

Please order now! We cannot guarantee delivery after publication.

Price $2.50
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1943 PACKAGING CATALOG

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- Mounting Chip
- Pasted Boards of all grades
- Sheet Lining
- Single Manila Lined Chip
- Bleached Manila Lined Chip
- White Patent Coated News
- White Patent Coated Manila Back
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- Calender Stained Bending Chip
- Silicated Board
- Water Resistant and Wax Coated Boards
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We manufacture a complete line of packaging boards and many with protective coatings. These materials are available *in quantity* for packaging without priorities. We also supply laminated moistureproof and greaseproof boards.

We offer such services as Sheet Lining, Silicating, Pasting and Graining. We manufacture the heaviest single-ply board on the market: .085 smooth finish and pasted boards to any required thickness.

Uniformity, cleanliness, strength are characteristics of our packaging boards that make them stand-by materials for packaging foods, drugs, tobacco, confectionery, and hundreds of other products.

We will gladly work with any packager in the development of moistureproof, greaseproof, and other special non-priority materials to replace those no longer available. Use the attached postcard without obligation.

CONTINENTAL PAPER COMPANY

Manufacturers of Paper Box Boards

RIDGEFIELD PARK, N. J.

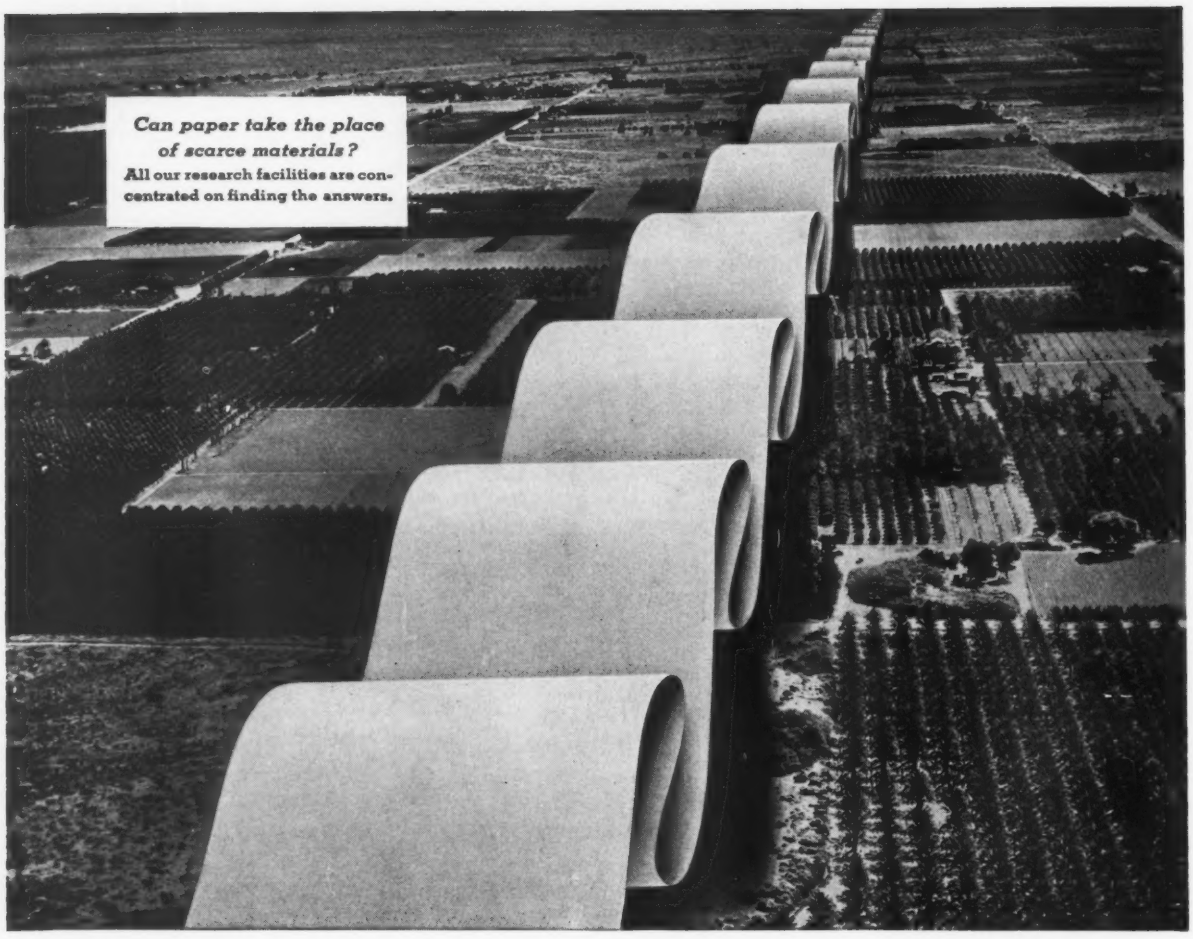
Send me samples of boards to help me package_____

Company .....

Address .....

City ..... State .....

Signed by .....



You learn a lot about Paper making a thousand miles of it a day

● Maybe it's lucky that making good paper isn't easy.

For the challenge keeps your mind restless. It keeps you digging into the whole subject of materials and processes, piling up information which goes far beyond the job in hand.

At least that has been our experience, in the course of turning out a thousand miles of paper a day.

And it occurs to us that we must have, tucked away, a lot of information and experience which can be useful to many people who never thought much about paper before.

Perhaps you are one of those people.

Perhaps you are faced, because of war shortages, with the necessity of finding something to take the place of metal — or plastics — or rubber — and finding it quick.

In that case, let's talk things over.

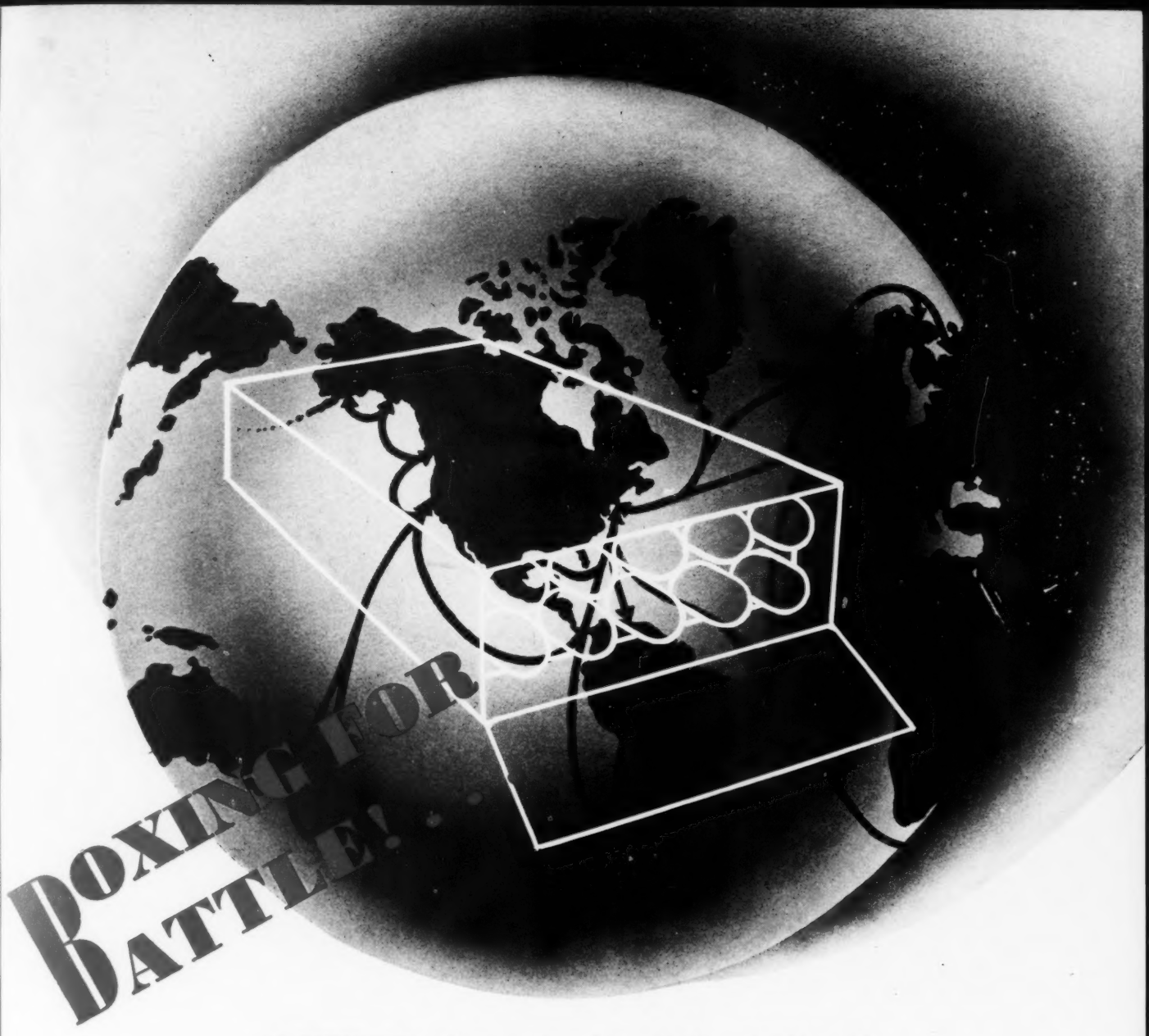
We are concentrating all our research in paper and pulp on the problem of finding replacements for scarce materials, and we'd like to put our experience against yours and see what happens.

We do not pretend to have all the answers, but we know a lot of surprising things that paper can do if given the chance.

Why not write us a letter and see what can be worked out?

Oxford Paper Company

230 Park Avenue, New York, N. Y.
Mills at Rumford, Maine & West Carrollton, Ohio
Western Sales Office:
35 E. Wacker Drive, Chicago, Illinois



MEDICINES and ammunitions; foods, clothing — hundreds and thousands of items both large and small, pour from American War plants to our far-flung fronts.

Packages for these myriad individual items call for mass production of the highest speed and accuracy and may demand protection from extreme heat or cold.

Warner craftsmen have effected a quick transition from making the packages of peace to the packages of war. Time and money have been saved for the Government and for manufacturers by placing at their disposal experience and processes developed by Warner. Our experts are at your service for consultation at all times.

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Makers of set-up and folding boxes of all types, transparent acetate containers, hand made specialties, counter displays and dispensers.

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New York Sales Office: 200 Madison Avenue, New York, N. Y.

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. . . For WARNERCRAFT QUALITY
. . . For WARNERCRAFT PRODUCTS

Call Bridgeport 4-0101 New York Ashland 4-1195

DAILY, more and more of America's vast output . . . military and civilian alike . . . is being packed in a non-strategic material of which there is no shortage . . . paperboard!

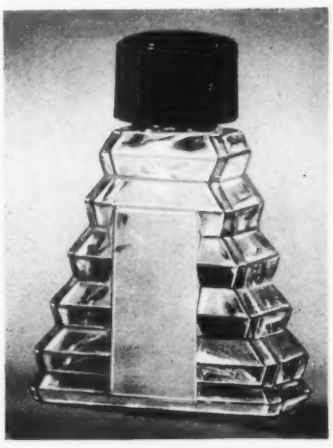
In the hands of Sutherland technicians, paperboard is performing packaging tasks unique in modern merchandising. Here, paperboard can be paraffined, laminated or combined with other materials to give special protective qualities. It can be printed for eye-appeal and identification, and fabricated into many sizes and shapes . . . rectangular, conical, cylindrical and pail-shaped.

Our complete research, design and manufacturing facilities are at your service. Let us make your new package one you'll be proud to present and happy to continue using after the emergency has passed. Call or wire! America is in hurry!

SUTHERLAND PAPER COMPANY

KALAMAZOO, MICHIGAN

"BUT THE ONLY TUNE THAT HE COULD PLAY
WAS OVER THE HILLS AND FAR AWAY"



More than merely beautiful is Stock Bottle No. 395. It is functional for modern packaging. Capacity: 1 dram. Finishes: 10 mm. 425, and 13 mm. 425.

THERE once was a time when it paid to specialize. Such extremes of monotonous activity as Marathon dancing, six-day bicycle riding and flagpole sitting were remunerative professions. But all that is gone now.

Today the accent is on conversion—which is only another name for adaptability. Workers have to change their jobs—manufacturers have to adapt their production lines. The same people and the same equipment have to produce new things and produce them fast.

Consider the stock container. It meets modern needs: it is adaptable, functional, standardized. Yet properly handled it can achieve real distinctiveness as well as utility. Our marketing engineers will be glad to show you.

CARR-LOWREY 3-Point Service

creates

PRACTICAL • ATTRACTIVE • ECONOMICAL

glass packages for cosmetics, drugs, foods, household products.

Carr-Lowrey Glass Co.

Factory and Main Office: BALTIMORE, MD.

New York Office: 500 Fifth Ave. • Chicago Office: 1502 Merchandise Mart

SUN TUBE CARRIES ON . . .

One part of our job—and a mighty important part—is the work we are doing for Uncle Sam. We've been assigned war contracts that call for skilled production, fast production—production that will help bring victory to our country.

But while some of our facilities are devoted to war work, we are still able to make and deliver Sun Tubes for dozens of everyday products—powders, liquids, jelly, tablets and pastes. We are still ready and willing to render the kind of packaging service that has made Sun Tubes the choice of America's best-known products.

If we can help solve your packaging problem—call on us. For Sun Tubes are convenient, economical, dependable. Promises of delivery are made to be kept. Write, phone or wire to Sun Tube Corporation, Hillside, New Jersey.

SUN TUBE CORPORATION

Hillside, New Jersey

CHICAGO, ILL.	CINCINNATI, OHIO	ST. LOUIS, MO.	ST. PAUL, MINN.	LOS ANGELES, CALIF.
James L. Coffield, Jr.	G. M. Lawrence	M. P. Yates	Alexander Seymour	R. G. F. Byington
360 No. Michigan Avenue	2428 Spring Grove Ave.	315 Chestnut St. (Room 125)	903 Pioneer Bldg.	1260 North Western Ave.

Duraglas* TRADE MARK REG. U. S. PAT. OFF. *. . . yesterday a Nameless Ideal*

—TODAY A VITAL PART OF WAR-TIME PACKAGING

As our Nation's needs grow greater, we are thankful that we spent peacetime years developing the Duraglas technique of making glass containers.

For this improved technique fitted Duraglas containers to fill vital wartime packaging needs.

The engineered strength and accuracy of Duraglas containers makes them practical, hardworking packages for almost every type of product. *Duraglas is delivering the goods.*

Duraglas strength made lighter weights possible, *greatly increasing the number of containers* which could be produced from a given amount of molten glass.

Duraglas quality-control permits faster production, which means *more bottles and jars* turned out every 24 hours to transport the Nation's necessities.

Despite the war-impelled speed-up, we have upheld Duraglas quality and performance. Simplified containers look alike. But only at Owens-Illinois can you get Duraglas—and only Duraglas can give you the results of the research, experience and special equipment that perfected the Duraglas technique.

Owens-Illinois Glass Company, Toledo, Ohio

OWENS-ILLINOIS GLASS

DEVELOPERS OF Duraglas* CONTAINERS

** Duraglas, the Improved Technique in Glassmaking*

When night-fighting commandos and rangers lash the Nazi-held coast, they are "packaged" for the job. Black clothes, blackened boots and faces provide camouflage, help to demoralize the enemy.

No product should be sent to market in "Blackface" Packages must still catch and please the eye, identify and protect the product, invite handling.

True enough, wartime restrictions make some packaging materials unavailable. Nashua, however, has designers with the ingenuity, chemists with the resourcefulness, craftsmen with the competence, and machinery with the capacity, to make packaging materials that are attractive and profitable from the materials that *are* plentiful.

If changes must be made in your present packages, let us help you — within the limits set by patriotic necessities — to keep the advantages and the continuity of your present designs.

Basically we are paper convertors — coating, gumming, impregnating, laminating, printing, waxing. Our base material is paper of many types, including transparent printed Cellophane.

CREATORS • CHEMISTS • CRAFTSMEN
NASHUA
MAKES PAPER MAKE MONEY FOR YOU

NASHUA GUMMED AND COATED PAPER COMPANY

Dept. M10, Nashua, New Hampshire

MODERN PACKAGING
OCTOBER 1942 VOLUME 16 NUMBER 2

1. *Cases of ham from America at a dock somewhere in England.*

WEATHERPROOF CASES

On the Thames, Britons are eating Texas beef and hams from hogs grown in the Middle West. Commandos and American Rangers are getting their fighting strength from canned butter, dried milk and cheese from the fertile hills and valleys of Wisconsin and Minnesota. In Australia and the Solomon Islands, General MacArthur's men are receiving vitamins from tomato farms of Maryland and the citrus groves of Florida and California.

America is the bread basket, the fruit basket, the creamery, the meat market, the green grocer of the world. The billions of pounds of agricultural products which this nation is exporting to the four corners of the globe are almost as staggering as the figures in a book on astronomy.

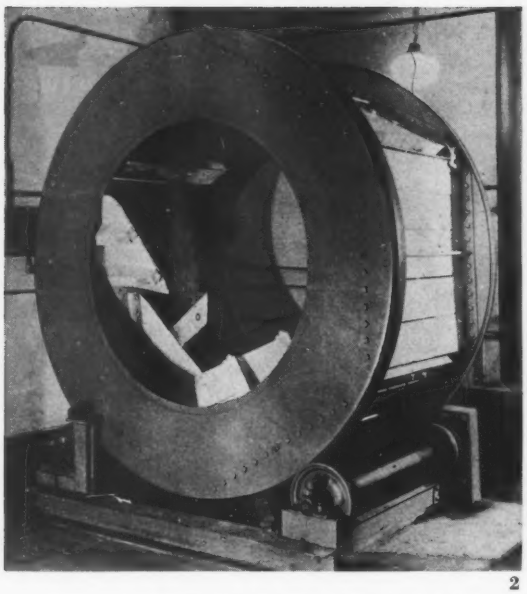
Department of Agriculture figures show that 5,000,000,000 pounds of farm products have been shipped for Lend-Lease alone since March 15, 1941. Military shipments are increasing daily, although no figures can be given on these for obvious reasons.

All of this means packaging—billions of cans and cartons. It also means millions of shipping cases that will make efficient, convenient shipping units for these cans and cartons—shipping cases that will stand up under all kinds of rough treatment, no matter how many times they have to be loaded and unloaded from freight cars, ships or trucks—shipping cases that will stand all kinds of weather—hot, cold, dry, wet.

This article was originally planned to be one about adhesives, but after several interviews with leaders in the manufacture of adhesives, discovery was made that perhaps the most timely subject in the adhesive industry was in the realm of developments for the so-called weatherproof solid fibre shipping container. These developments are so closely allied with the whole development of weatherproof containers, that it was decided to enlarge the discussion to the progress in this field. Such findings, it is believed, will be helpful not only to the makers of such shipping cases, the manufacturers who supply the adhesives, but to the hundreds of packers of canned meats, dried eggs, powdered milk, vegetables, fruits, who use these cases and, therefore, have a vital interest in the kinds of containers which must carry their products to the armed forces and the hungry millions of the world.

It is no overstatement to say that until the beginning of this war, wood was the most commonly used material for export shipments. Even now, the government specifies wood for certain types of shipments, but wood boxes are scarce—not because of a shortage of raw material (except for nails), but because of the time element in curing the wood and the shortage of labor and manufacturing facilities. Wood also has certain disadvantages. It requires more labor and more handling. Nor is wood indestructible. When broken, a wooden case can cause considerable damage. Cans or cartons inside a broken wood case can be badly bent or punctured by broken splinters.

Today, however, the biggest volume of overseas shipments



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2. Number of drops a container can withstand before failure in this revolving drum is regarded as the measure of its serviceableness. 3. Containers are submerged in water to simulate severe water-soaking conditions they may encounter on way to destination. 4. Below. Weatherproof Fibre Box Group symbol.

of foods is moving in the weatherproof solid fibre container. Briefly the board for such a container is made of several plies of kraft paper or re-pulped board. Rosin from Southern pine is one of the most common types of sizing used for paper to make the plies for weatherproof solid fibre cases. The plies are laminated together with "water-resistant" or "waterproof" adhesives. The cases are sealed with a "water-resistant" or "water-proof" sealing compound.

Though still far from perfect, the improvements that have already been made are outstanding and eventual developments may well be one of the real contributions to the future of the packaging industry that will have grown out of wartime necessity.

A year ago such weatherproof containers were virtually non-existent, because there was little demand for them. Products for export usually went in wood. Domestic cases did not require weatherproofing such as is necessary for foreign shipments. Corrugated or solid fibre boxes laminated and sealed with a silicate of soda adhesive or starch were adequate. They were not adequate boxes to load into the holds of ships, to stand for hours, maybe days, on a wharf in a pouring rain. The best of regular boxes can fail without proper sizing or water-resistant adhesives. Water is their worst enemy, causes separation of fibres, loosens the seal, and eventually causes collapse and complete failure of the container.

That is just what happened to some of the first fibre shipping cases sent to foreign ports early in the war. In fact, it was the "reason why" for the government specifications for weatherproof cases. These specifications as now drawn up require:

1. That the solid fibre board used must be of a certain thickness.
2. That it must pass a specified Mullen test.
3. That specimens 10 by 6 inches cut from finished boxes shall not separate more than 2 inches from any edge after one hour immersion in water.
4. That the same size specimen after $2^1/_2$ hours immersion must weigh not more than 150 per cent of the weight when dry.
5. That after $2^1/_2$ hours immersion the board must have Mullen test not less than 50 per cent of the dry Mullen test specification.

When first bad news of the performance of solid fibre cases came in from foreign ports last year, the makers of these cases decided that they should get together to remedy the situation. Consequently, 30 manufacturers of fibre boxes formed what is known as the Weatherproof Fibre Box Group to pool information about improvements in the making of these boxes. They adopted a symbol to go on all the cases approved by this group. The symbol as adopted is reproduced below on this page. Members submit for test all boxes made by the group and only weatherproof boxes which meet the test specifications may carry this symbol. In the last 10 months since Pearl Harbor, excellent progress has been made. More and more boxes are meeting the government's ply test and the association has set its own standards above those established by the government.

Among the many difficulties, however, is the lack of information that can yet be obtained on the performance of these later boxes which have been weatherproofed. The reports that come from foreign ports in the Pacific, for example, are still about boxes shipped many months ago. In fact, a new government ruling that all canned meats for export must now go in wooden cases has disturbed this group a great deal. They feel this ruling is probably based on the performance

of regular boxes shipped months ago and not on the improved weatherproof boxes which are available today.

The tests for the Weatherproof Fibre Box Group are being conducted by the Container Testing Laboratories in New York City. Members of this group submit to the laboratory samples taken at random from every shipment of weatherproof boxes from their plants. These are tested in accordance with the government specifications mentioned above as well as against the group's own standards.

In addition, tests are frequently made to determine the durability of containers under severe conditions of weathering and handling. These tests are devised to simulate as nearly as possible all the conditions to which the containers will be subjected from the time they are shipped from a food processing plant until they reach their final place of destination in a foreign port.

The cases are delivered flat to the laboratory where they are filled with loaded cans, sealed and strapped with a $1^1/_2$ in. by .015 flat metal strapping. Then they are given 50 drops in a revolving drum to represent the number of drops they will receive on the way from a packing plant until they arrive in the hold of a ship. They are then taken out of the drum and sprayed with water to simulate rain or submerged in water to simulate more severe water-soaking conditions they might encounter. After that they are put back into the drum until failure.

This drum, as has been described in previous issues of Modern Packaging, is a seven-foot hexagonal structure resembling a large barrel placed on its bilge. On the inside faces of the drum is arranged a series of baffles which cause the container to fall on its various parts in succession as the drum revolves at a constant rate of two revolutions per minute. The number of drops a container can withstand in the revolving drum before failure is regarded as the measure of its serviceableness. The failures occur gradually so that weaknesses of design and construction can be detected.

In a recent series of tests certain boxes were tumbled in the revolving drum immediately after exposure to the following weathering conditions:

1. 65 per cent relative humidity at 70 degrees F.
2. Two weeks exposure to 90 to 95 per cent relative humidity at 70 degrees F.
3. Three hours under shower of water.
4. 24 hours submersion in water.
5. 24 hours submersion in water and then dried out.
6. Seven days submersion in water.

The accompanying photographs and their captions show the results of some of these tests and indicate forcibly improvements that are being made.

In the making of these containers, one of the first considerations is proper sizing for the paper plies. One of the next important factors is the adhesive used for the lamination of the plies to make the board. Next important is a sealing adhesive for the flaps. A difficulty, too, it would appear from the photos, is maintaining the same strength at the corners, along the scored edges and at the seams of the containers as for the side walls.

Two of these problems deal directly with adhesives. The others not only with the construction of the board but with the fibres, themselves, the sizing, the method of scoring, etc.

A silicate of soda adhesive formerly used for laminating the plies of a regular fibre board container is not waterproof, nor is it even water-resistant. The first step in the production of the weatherproof case, then, was a search for adhesive formulae that would provide the weatherproof qualities for the walls of the shipping container. Naturally, this encountered many difficulties due to the fact that many materials which formerly could be used are now on critical lists. Many of the first developments made use of asphalt adhesives, but these are being replaced to a large extent by synthetic resinous compounds, particularly with a urea formaldehyde base. This has been found very effective, but it has a serious drawback in that it cannot be delivered mixed. After it is mixed, the mixture must be used up within four or five hours or the batch is useless. This means that the manufacturer must know in advance exactly what his production is going to be at a given time. If it is held up for any reason, such as plant breakdown, delay in the delivery of any other material used in the manufacturing process, the adhesive mixture is wasted if it isn't used up within the four or five hours.

Announcement has been made recently of a new type of laminating adhesive for this purpose which can be delivered mixed and which, it is claimed, will eliminate this hazard of waste. Results will be discussed in a later issue.

5. *Regular No. $2^1/_2$ container after 24 hours submersion.*

6. *Weatherproof container after 24 hours submersion.*

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7. Regular No. 2½ container after 3 hours spray. 8. Regular No. 2½ container after 3 hours spray and 11 drops in the drum. 9. Weatherproof No. 2½ container after 3 hours spray. 10. Weatherproof No. 2½ container after 3 hours spray and 100 drops.

Adhesives of these later two types have very good weatherproofing qualities and will stand immersion for several days, even weeks. There are probably more made from non-critical materials on the market today, although it is difficult to find out much about the actual elements of the compounds because each company guards these secrets carefully due to the highly competitive nature of the adhesive industry.

The real problem of the seal, however, still remains, according to most authorities. Many claims have been made and many things have worked fine on small samples in a tumbler in the laboratory, but the big question is to obtain a compound of non-critical material that will meet all requirements for conditions of application on high-speed case sealing equipment on the packaging lines of the plants where the containers are being packed for shipment and will pass all the weatherproofing tests when applied to factory filled and sealed containers as they are when they are ready for shipment.

Certain types of case sealing materials, even though effective, are not practicable. For example, if they take too long to set, they can tie up a whole production line. If you feel the flaps of a solid fibre shipping container, you can appreciate what a problem it is to get a glue which will make those strong flaps stay down permanently sealed by applying a few moments of pressure as the average case sealer does, assuming beforehand, of course, that the glue is applied evenly over every part of the surface.

This problem of case sealing is also more important because it is an operation that must be done in the users' plants, not where there are a hundred specialized chemists on hand every day to see that everything goes right.

This user wants assurance that the cases he packs for military shipment will arrive at their destination in good condition. He must rely on his supplier of weatherproof cases and his adhesive manufacturer to provide him with materials that will do this. His filled cases must meet government specifications. He must take their word that they do, unless his firm is large enough and has sufficient laboratory equipment to do all the testing himself. Few firms, however, have such equipment. An outstanding example of how this problem is being solved by one large company will be found in the article about the Loose-Wiles Biscuit Co. on page 42 of this issue.

Nor has the government yet made any definite specifications in regard to the adhesive formulae that can be used or made definite allocations of the amount of critical materials that can be used for this purpose. There are specifications, as mentioned before, to determine the effectiveness of weatherproof board. They may be all right as far as they go, but they do not include specifications for the laminating adhesives or for the case sealing adhesives.

Eventually this will be done, but this is a big war and many things are ironed out only when the problems arise. Many technical points must be clarified. For example, it must be decided whether the adhesive used in sealing this type of case should be absolutely waterproof rather than the present type now on the market, which it is said depends more on chemical reaction of biting into the sizing of the paper for good anchorage and the actual sizing of the paper to give waterproofness to the seal, or whether the adhesive should be basically waterproof within itself and not dependent upon the sizing in the paper.

The latter type of adhesive has been developed which is waterproof, it is said, and will operate on case sealing machines as well as be satisfactory for hand-sealing methods. This development, however, is moving along slowly because critical materials are involved and no opinion has been offered by Washington authorities on the amount of critical material that will be allotted for such work.

Which school of thought is right could only be approved by careful, painstaking tests. These tests should be made on cases actually sealed under actual operating conditions. This will eventually be done. A great deal of progress has been made in eight months, but it is nothing to what will probably take place in the next few months.

In this situation like all others in industry today there must be give and take—a cooperative attitude on all sides if anybody is going to get anywhere. The fact that the government made the restriction—nothing but wood boxes for canned meats—is an indication, even though a decision might have been made on a false premise, of what can happen if a certain container meets with failure on any front. The Weatherproof Fibre Box Group took this strike against its type of container in its stride and the work they are doing should go a long way to prove the (*Continued on page 104*)

11. *Regular No. 10 container after 3 hours spray.* **12.** *Regular No. 10 container after 3 hours spray and three drops in the drum.* **13.** *Weatherproof No. 10 container after 3 hours spray.* **14.** *Weatherproof No. 10 container after 3 hours spray and 100 drops.*

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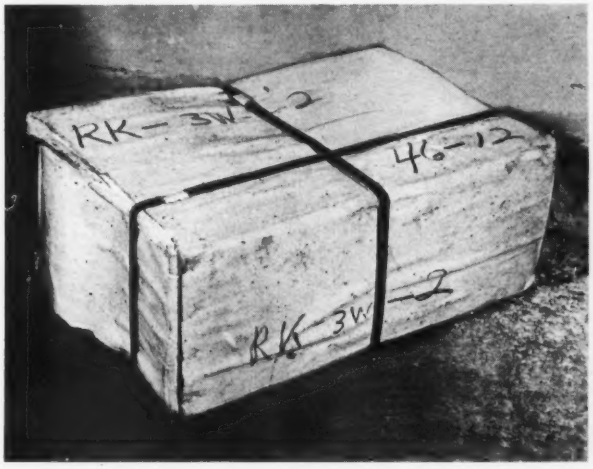

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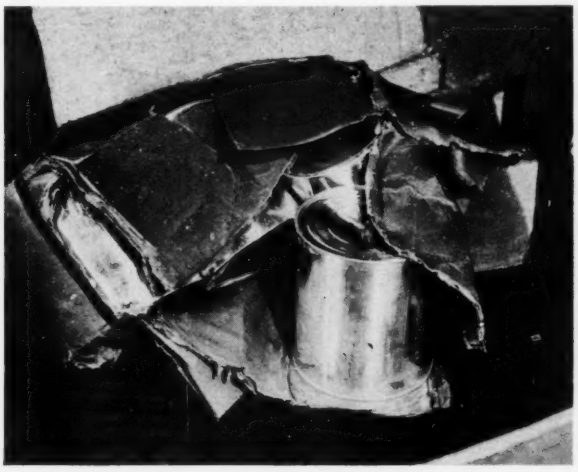

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K. D. Loose, vice-president of manufacturing, proves to Amelia, receptionist at Loose-Wiles, that not one drop of water has penetrated into the container after 12 days of submersion.

Loose-Wiles aqua-proof seal

How to make a water-tight seal for a weatherproof solid-fibre shipping container has been one of the most baffling problems of wartime export packaging.

A method just developed by the Loose-Wiles Biscuit Co. looks like a very promising solution to this problem and has been adopted by the United States Army, the Navy and Lend-Lease authorities for water-tight packaging of biscuits. The method has also been released for use to all manufacturers who may wish to adopt it for shipments of foods to armed forces throughout the world. It represents five months of continuous research and experimentation with many types of materials and procedures. Triumph came with "official test number 171."

Ten months ago Col. Robert Carter and Lieut. Col. L. C. Webster, U.S.A. Quartermaster Department in Washington, told representatives of the biscuit industry that "tin will no longer be available for containers. We're depending upon you gentlemen to develop a satisfactory substitute."

That was pretty sad news, because previously biscuits were packed for export in tins housed in shipping containers of wood. Furthermore, the Quartermaster Corps specified "at least as good, if not better."

These two army officers said, "When the Navy lands a task force to establish a beach head on some remote enemy island in the Pacific under coved of darkness, we want emergency ration containers that can, if necessary, be dumped into the water from supply boats and floated ashore—without a drop of water seeping in to damage the contents.

"It may be also that these rations for our Army forces in Alaska, Australia, Ireland, Iceland or elsewhere might be deposited on open docks and remain for days exposed to rain or snow. If so, the containers must be tough enough to take it and keep the contents completely protected. And remember, you can't use tin, black metal, foil, rubber, micro crystalline wax or any other materials vital to victory production."

The task was tackled for Loose-Wiles by James Larrimore, director of the Government Supply Division, in cooperation with Kenneth D. Loose, vice-president in charge of production, Dr. Stanley Jackson, Alan Wiedersum and O. L. Scheller. A brief description of their development is as follows.

Emergency Type C Ration Square Biscuits are first packed into the company's standard 1-lb. chipboard cartons. These cartons, for added protection, are double wrapped with wax paper. Each of the wraps is put on so that seams of the waxed paper are at different sides of the cartons.

Twenty-four of these pound cartons are placed in a weatherproof solid fibre container on which you may see imprinted the symbol of the "Weatherproof Fibre Box Group," indicating that the box has met the government ply test for weatherproof boxes (see first article in this issue). Loose, Wiles, however, retests these cases in its own laboratories

Alan Wiedersum of the technical staff extracts one of the containers from the submersion tanks used for testing.

and accepts only those which meet their specifications in addition to those of the government.

The cases used are double scored and constructed with one lengthwise manufacturer's seam and end flaps open ready for sealing. Inside the flaps a rectangular piece of weatherproof fibre board is inserted loose at each end directly over the biscuit cartons at the time the cases are filled. Then the cases are ready for the new sealing line which has been set up in the company's warehouse. The sealing operation at present is completely manual.

The first man applies with a brush a sealing compound of asphalt heated to a temperature of more than 300 degrees all over the flaps, the edges and the corners, closes the flaps with hand pressure and turns the case over on its sealed end. The next man in the line does the same to the other end. Third man puts the edge of the box with the manufacturer's seam through a V-shaped trough containing a continuous flow of molten asphalt compound so that the seam receives this additional sealing. Each end of the container is then dipped into the asphalt to a depth of about two inches, so that both ends are completely covered with the compound. A strip of 60-lb. kraft impregnated with 25 lbs. of asphalt per ream is then placed over the side seam sealing. Squares of the same material are placed over each end like a cap. These do not add to the waterproof qualities, but are put there to cover the asphalt compound which might otherwise be sticky to handle.

Two of these 24-lb. containers are then enclosed in a larger weatherproof fibre container which is similarly treated with asphalt and paper capping, then bound with steel strapping.

The completed packages have been submerged under a 10-in. head of water for as long as 12 days and never shipped a drop of water. The method in which the flaps are cut to fit evenly along the double-scored edges of the containers and the all-over sealing of corners and seams with the asphalt compound, it is believed, will help to eliminate some of the weaknesses of containers that have failed in the past. The company is not satisfied with the weatherproofness of the fibreboard and have already developed a much more satisfactory container in cooperation with their supplier, but is pleased with the excellent improvements that are being made continually in this direction for overseas shipments.

Production line shows how the molten asphalt is applied to seal the weatherproof containers for army biscuits.

These new tinless packs have certain other advantages. The company said that they weigh 12 lbs. less than the previous type of export pack used and in quantity production will actually cost no more and possibly less. Since the fibre-board cases can be delivered flat to the Loose-Wiles plant, they save a tremendous amount of warehouse space, formerly required for the tin containers and wood shipping boxes, which took up as much space unfilled as filled.

One of the greatest difficulties encountered was the method of handling asphalt and obtaining a compound which would withstand both hot and cold climatic conditions after it had set. This required months of work with all manufacturers of asphalt compounds. The trick of handling the asphalt is simple after you once know how. The secret is in maintaining the asphalt at proper melting temperature in the vats of the assembly line continuously while the sealing operation is going on. The compound finally developed will hold up well in zero temperatures and cracked only at a temperature of 60 below zero. Since it is held in place by the 60-lb. kraft paper impregnated with asphalt and tends to melt when raised to a higher temperature again, it will repair itself in most instances. For tropical climates, tests showed that the compound should not melt up to 135 degrees.

Due to shortages and difficulty of obtaining new equipment these days, Loose-Wiles is proud that they have been able to set up a production line to handle this sealing operation with practically all odds and ends of materials around the plant. A standard asphalt melting unit is used. The vats on the line are made from discarded dough batch mixing units which the company had on hand. Gas heating units were installed under the vats to keep the asphalt at proper melting temperature. Scrap was used to make the V-shaped trough for sealing the side seam.

Five of the 15 Sunshine Biscuit plants from coast to coast are already producing and packing this new type of container and many other industries are already using it because of the satisfactory results that have been achieved by this method.

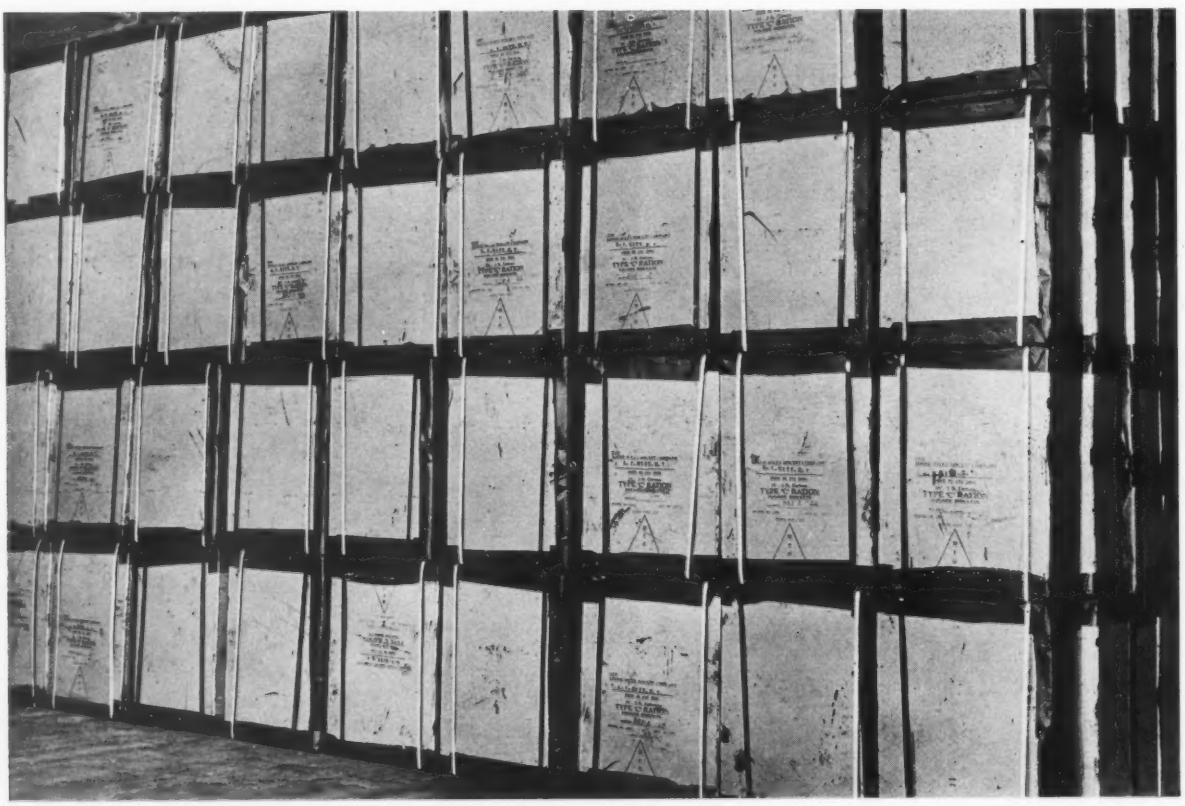
All preliminary tests of the containers made under conditions simulating those which the packs will have to undergo in the course of shipment from the point of origin to their final destination have been passed with excellent results. In fact some of the packs are said to have even survived a recent torpedoing and come through in such condition that the biscuits were dry and eaten when the pack was finally brought ashore.

The company expects to have more reports on further tests after additional improvements are made on the new fibre board that has been developed.

The entire process is one that will be of interest to packers everywhere who have a problem of making overseas shipments. Aside from the apparently satisfactory results to be derived from this type of pack, the method is particularly advantageous in that it can be put into operation with so little equipment. Many plants will be able to develop a set-up for such a process of sealing containers with idle or scrap material now at hand in their factories and warehouses.

One more advantage is that at the present time asphalt seems to be available in significant quantities. In a recent report prepared by the Conservation Division of WPB, asphalt was included in a list of materials which at present writing are not considered critical. This is not the case with several other materials that could be used if obtainable.

Aqua packs in the warehouse ready to go to fighting forces all over the world.



"FREE MEN CAN WORK TOGETHER"

Bred in the bone of American business is the principle of competition. We have blinked at its wastes and inefficiencies—but in spite of them—we have made it work. True, the principle has been threatened at times by the advocates of a controlled economy of induced scarcity. Now there is a real scarcity which is playing ducks and drakes with both die-hards and left-wingers. The principle of competition must go into cold storage for the duration. It is essentially adapted to peace time. War calls for coordination.

In a free country, the idea of cooperation under compulsion, even in the face of danger, is abhorrent. It remains to be seen whether we can establish workable patterns of cooperative action voluntarily. For one thing, we'll not find it easy to abandon or suspend the modes and methods of competition. For another thing, the Department of Justice very properly keeps a hawk-like eye open for collusion and conspiracy in restraint of trade.

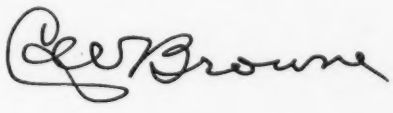
Ways must be found to work together. The world situation grows more critical every hour. The Axis powers, coordinated at the point of the sword, have the initial advantage. The free peoples must voluntarily cooperate or perish by that sword.

All of which is glittering generality. Voluntary cooperation can be arrived at without the sacrifice of competitive individuality. Intellectual resources can be pooled for the common good because of the common danger.

That danger is great. The casualty lists now beginning to appear, bear tragic testimony to that. Perhaps we *can* lick the whole world—but the Axis powers won't wait on our convenience. The time is NOW. Individually we are doing what we can. We buy bonds. We serve in the OCD. We donate blood. But that spirit of devotion must be translated into common-sense business cooperation. Without waiting for government blue-prints—which will savor of compulsion—free enterprise must demonstrate its capacity to meet the emergency by voluntary action.

A pattern is at hand, where just that has been done. In another part of this issue will be found a reference to the combined activities of the Weatherproof Fibre Box Group. Instead of letting the laboratories of a dozen competing companies work on identical problems, in secret and without the benefit of each other's findings, they have standardized their standards, organized their problems, and divided up the work—with consequent speeding up of solutions and vastly increased benefits for the immediate needs of the war.

What that group is doing can be multiplied throughout the packaging field. Grimly, ominously hanging over us is the issue of the war. We *can* lose it, in spite of the heroism of those at the front and the sacrifices of those at home. A full sense of the need will make us bury the competitive hatchet for the duration and immediately work out practical plans for combined action. Not only will this help to hasten the end of the world cataclysm, but it will prepare each one who participates for a finer type of competitive service when peace comes.



Cheese without foil or rubber

BRITISH OFFICIAL PHOTO

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Recently, Secretary of Agriculture Claude R. Wickard made the announcement that there is plenty of cheese not only for our armed forces and lend-lease shipments, but also for increased consumption by domestic consumers. From August 13 to 29, this year, a special Cheese-Week drive was made to increase domestic consumption of cheese. With the scarcity of certain meats, cheese can be used as the main protein part of a meal. Cheese has been one of the foods which the U. S. Department of Agriculture has designated "victory foods."

The situation was of an entirely different complexion a year ago. Commenting on the situation then, Secretary Wickard said, "It was only last year that the needs of the British looked so large that it seemed impossible to fill them. We asked for a 50 per cent increase in production. Now," he continued, "dairy farmers and the cheese makers are turning out so much that we can send enough abroad and still have plenty at home. A few weeks ago I was able to urge consumers to eat all the cheese they want."

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Some idea of the tremendous production of American cheese makers can be gained from the fact that the output of Ameri-

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can Cheddar cheese in the first five months of 1942 totaled 387,125,000 pounds, more than 50 per cent above the same period last year. Cold storage holdings of cheese on July 1 amounted to nearly 200,000,000 pounds. On an average, since March 1941, every third pound of cheese offered for sale in the United States has been destined for shipment to the United Nations.

With cheese one of the most important of the wartime foods, not only for our armed forces and the United Nations, but also for civilian consumption at home, the packaging of cheese of all kinds has become an immediately grave problem. There is scarcely a cheese maker or a manufacturer of packaging materials for this type food whose laboratory is not working overtime to find the best possible wrapper and packing for cheese—wrapper and packing that will stand up under the most rigorous and exacting of wartime conditions.

Even with a wide choice of wrapping materials, the proper packaging of cheese is difficult. With wartime shortages and restrictions, the difficulty of developing suitable and practical materials is enormously increased. Foil, which was perhaps the most commonly used material, is no longer permitted. Pouches of rubber hydrochloride sheeting, a later development for processed and some natural cheeses, are also out. Metal and rubber are needed for the vital material of war, and cheese makers must find substitutes to replace them in packaging. This much has been discovered already—no one type of wrap is going to replace foil. It will be necessary to create a number of different types of wraps, the type being dependent upon the requirements of the particular cheese.

In the average sizable food store about 50 different varieties of cheese are sold. These include cheeses of the four basic types (1) process cheeses of all kinds; (2) hot pack cream cheeses and pasteurized process Limburger and the like; (3) cold pack cream cheeses such as Philadelphia; (4) and the natural cheeses, such as Camembert, Blue, Brick, etc. The National Cheese Institute gives this classification, based upon a division of kinds of protective wraps needed by these types.

The Borden Co. markets 60 different flavor varieties in about 200 different sizes. The numbers of varieties and sizes always demanded expert packaging even before war restrictions and conditions had to be taken into consideration. Borden was ever on the alert for better and more practical materials and packs. The company experimented in its own laboratories and tested new wraps, containers, etc., developed by manufacturers. Approximately 12 tests were given wraps submitted to the company. These tests included those for flavor, odor, moisture resistance, protection under high temperatures and high and low humidity and against molds, long storage under varying conditions and for strength, etc. Comparative studies were made with tin foil and wrappers of

Top opposite page. American lend-lease cheese arrives in England in wired, round wooden boxes. A winchman, unloading the cheese, lunches on a slice of it. 1. *Wedge-outs in wraps of coated cellophane are packaged four to the waxed paper carton.* 2. *New folding carton for the 5-lb. loaf of coated cellophane wrapped process cheese is shown in the foreground. At the top is the formerly used wooden box.* 3. *New and old packages for Chateau cheese. At the top is the cheese in its former foil wrap.* 4. *Consumer size packages of process cheese, showing folding carton, printed paper overwrap and cheese in its wrapping of coated cellophane.* 5. *Special mailing unit devised by Borden as gift package for men in the services.* 6. *Newly developed wraps for the large cream cheese loaves and the small 3-oz. consumer size. New wraps are made of parchment, laminated to a special type cellophane. Photo, courtesy Reynolds Metals Co.*

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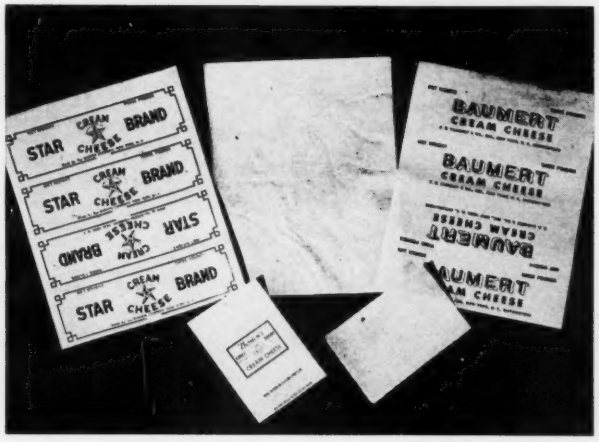

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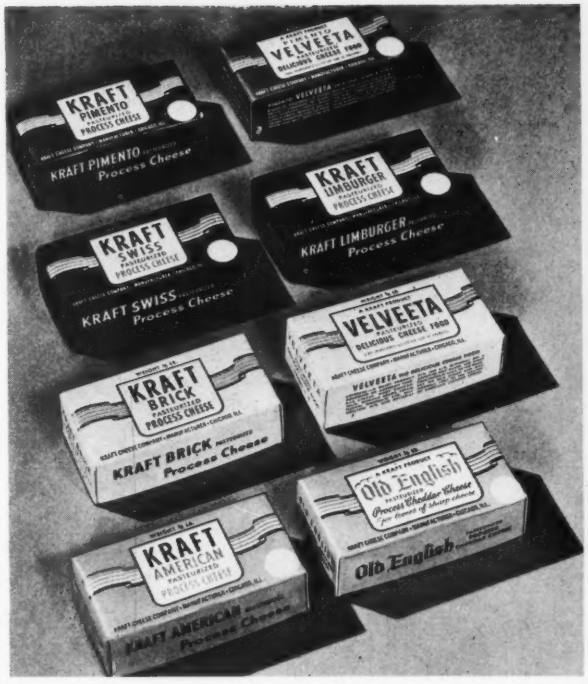
cellophane, coated cellophane, rubber hydrochloride sheeting and coated glassine paper. Thus, long before Pearl Harbor, the Borden Co. was aware of many kinds of wrappers that might prove suitable substitutes for both foil and those that used rubber. Some of them, like the coated cellophane wrap for the process cheeses, had been placed on the market. Elimination of foil and rubber gave impetus to further testing of available substitutes and to the use of those of non-critical materials which had proved satisfactory. However, when new wrappers are being considered, it is not enough that the materials themselves are adequate replacements. The new wraps must involve no new machinery—which is now decidedly not available—and they must be adaptable to packaging on existing machinery with as few adjustments in the production line as possible. For the most part, Borden states, the company has been able to use the new wraps which have been adopted on their old machines.

Cellophane, coated with an amorphous wax, has taken the place of foil for the 2- and the 5-lb. bulk size and the small $^1/_2$-lb. consumer size packages of process cheese. The 2- and the 5-lb. loaves are also packed in solid fibre containers which take the place of former small wood boxes. The fibre container is lighter in weight than the wood, but chief reason for switching has been the difficulty of obtaining wooden boxes. Although the supply of wood is plentiful, curing and manufacture slow up the ready availability of the boxes.

In 1940, Borden pioneered the "wedge-cut." Wedge-cuts are pieces of cream cheese made by slicing the large loaf into triangular portions. Each portion is then wrapped and sealed for consumer sales. When first introduced on the market, the dairy clerk sliced and wrapped the cheese at the time of sale. Borden now wraps each wedge in coated cellophane and packages four wedges to a waxed paperboard carton. This pre-wrapping, of course, makes for better sanitation and prolongs the freshness of the cheese. The small, 3-oz. size of square-cut cream cheese is wrapped in a material composed of parchment laminated to a special type of cellophane. Cream cheese is considered almost exclusively a product for civilians since it is classed with butter, milk, cottage cheese and the like and is highly perishable. Because freshness is of prime importance in cream cheese, the Kraft Cheese Co., for example, maintains a nation-wide system of delivery by refrigerated trucks which bring Philadelphia Cream Cheese to the retail dealer quickly after packaging. The company is using a new, transparent wrapper, replacing the foil wrapper formerly employed. The wrap capitalizes on the freshness of the product, allowing the customer visual evidence of its creamy whiteness. The new wrap is made of a special coated cellophane, which was in the process of development some time before our entry into the war.

Kraft is also using a transparent wrapper which takes the place of former ones both of foil and rubber hydrochloride sheeting for the company's 2-lb., 5-lb. loaves and consumer

7. Specially coated cellophane cheese pouches used for loaves of processed cheese are popular and take place of those of rubber hydrochloride sheeting. Photo, courtesy General Felt Products, Inc. 8. Swiss cheese forms its own wrapper. Round and rectangular Edams have transparent cellophane wraps, but cheese itself is colored red and has coating of paraffin. Argentine Blue has an overwrap of parchment, with an innerwrap of foil. 9. Round Goudas are packed in a corrugated shipping container which has separate compartments. A small six-compartment folding box serves retailer for display tray.



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10. Small process cheese of all types are packaged in these consumer-size cartons, wrapped in paper, printed with brand name and product identification. 11. Loaves in wooden shipping boxes. Loaves are wrapped in printed, transparent, coated cellophane. 12. Philadelphia cream cheese in former foil wraps and in present ones of special coated cellophane. New wraps afford product visibility.

packages of pasteurized process cheese. The wooden shipping containers in which the large loaves were previously packed are also giving place to fibreboard boxes. East Smithfield Farms, Inc., reports that it is packaging its bulk cream cheese —the 2- and 3-lb. packs—in parchment, laminated cellophane wraps. This firm is also shipping the loaves in paper instead of wood containers.

A striking development since the outbreak of war in Europe and the consequent shutting off of imports has been the greatly increased domestic production of foreign types of cheese, such as Gouda, Edam, Blue, Camembert and Italian-type cheeses. America today produces many foreign-type cheeses that not only compare favorably with the European products, but in many instances, it is claimed, are superior from the standpoint of scientifically controlled quality and sanitary manufacturing methods. Packaging of such types of cheese follows closely the traditional packages in which they were formerly imported. Baby Goudas and Edams, for example, wear the gay red paraffin of their European counterparts and are wrapped in a special, coated, transparent cellophane. These cheeses are shipped in solid fibre containers which have compartments for each cheese.

The wrapper problem has been somewhat more difficult with types such as Blue (which is similar to Roquefort), Camembert and Swiss Gruyere. These are now, in some cases, marketed in wrappers which ingeniously imitate the foil to which consumers are accustomed. Actually the "foil" is a specially coated cellophane. The foil-wrapped triangles of various foreign-type cheeses using substitute wraps look much the same as before and it is claimed that in many instances the new wrappers are doing an efficient job of protecting quality and flavor. The gourmet can thank American industry and research for preserving the familiar aspect of these delicacies in the face of wartime restrictions. Most of these paradoxical products—American-made foreign style cheeses—are natural cheese as distinguished from processed cheese. A number of native American cheeses are also natural cheese. Packaging natural cheese in consumer units has from the beginning presented major obstacles to producers. Natural cheese must be cured and aged before it is ready for consumption. To do this to small consumer units would involve prohibitive handling costs and, for this reason, the development of consumer packages has always lagged behind the progress made in packaging process cheese. Material restrictions now raise further barriers. However, greater use is being made today of a wax-treatment process whereby the cheese is protected with transparent cellophane. The method, which has been employed for something over a year, permits cheese to be produced, cured and aged in the (*Continued on page 104*)

Sulfa drug shaker

Sulfanilamide is now an important agent in equipping the fighting services. Medical departments of the U. S. Army and Navy have adopted a sterilized 5-gram package of the drug as part of the contents of Carlisle kits which are issued to all men going into a theater of operations. In addition, the Army Medical Corps is making the drug available to hospitals and will include a supply in field chests and auto kits. The packages used in the kits and in hospitals are essentially similar except that the hospital unit is provided with a covering envelope to maintain sterility of inner package and contents. Both packages were devised by Hynson, Westcott & Dunning, Inc., in consultation with military authorities. A shaker envelope was designed to permit even distribution of the drug over the wound area without contaminating the powder. This envelope is provided with a series of perforations at one end, through which the powder is shaken. To prevent leakage or contamination, a second flap is turned over the shaker end and sealed in place. To use the package, it is only necessary to pull the outer flap open, thus exposing the perforations. For surgical use, the shaker envelope is enclosed, before sterilization, in a second envelope, provided with an easy-opening device. The surgical package is introduced into a heat-sealed cellophane bag which protects it against moisture and contamination by mustard gas. Many difficulties were encountered in designing a shaker package for military purposes. After experimenting with a variety of materials, paper packaging was investigated and a combination of a particular type paper together with a suitable adhesive was finally arrived at and proved successful.

DESIGN HISTORIES

Baked beans in glass

The familiar cans of pork and beans, baked beans with tomato sauce and red kidney beans are going through a transition period and many of the well-known brands are appearing in glass containers with replicas of the labels which appeared on the former cans or with smartly designed new labels. Outstanding features of the containers illustrated in the photograph are the lightweight jars, the labels so placed that contents of all packages are visible for inspection and the use of little critical metal.

Van Camp's new jar repeats the appearance of the can previously used. A wrap-around label leaves ample room at the top so the baked beans may be easily seen. The former can label carried a full color lithograph of the beans in order to give the shopper the impression that she was looking at the contents. The new jar thus has the advantage of actual visibility. The Scott Co. also took advantage of their jars' visibility in much the same way. Former cans had labels with dishes of the pork and beans and the baked red kidney beans lithographed in full color on the front. Narrow wrap-around labels now afford full view of the contents.

Heinz completely redesigned its label, retaining only the long familiar "57" encircled on the front. Directions for serving have been added at the bottom of the front panel. The Edgar F. Hurff Co. and Libby's have adapted the same design of their old labels to those for their new jars and have kept the eye-appealing photographs of the contents on the front panels.

Credit: Jars and closures by Anchor Hocking Glass Corp.

Cleaning fluid bottles

Energine cleaning fluid and Energine lighter fluid, manufactured by The Cummer Products Co., Bedford, Ohio, are now packaged in these new brown bottles, instead of the cans used formerly. These are two more products which may be added to the list of those which have been converted to glass containers in order to save metal for the war effort.

Labels used on the bottles are improved adaptations of the former lithographed can identifications. The new labels retain the same colors as those on the cans and they are brightly varnished so that the colors will be protected when the bottles are stored or handled. Red metal caps are used on the bottles of inflammable fluid and blue metal caps are used on the fireproof fluid. This makes not only for the convenience of the storekeeper in spotting at once the kind of fluid, but it is also an aid to the householder in locating the desired fluid on home shelves. Two sizes of the bottles of inflammable fluid have been approved by the New York City Fire Department and contain that department's Certificate of Approval.

A plastic filling spout seals the two sizes of the lighter fluid bottles as a substitute for the metal spouts previously used on the cans. This plastic which seals the spouts may be easily broken for pouring the fluid and then resealed with a tight cap which is provided as part of this closure.

The Cummer Products Co. reports that conversion to glass has resulted in merchandising advantage for these products.

Credit: Bottles, Owens-Illinois Glass Co. Caps, Phoenix Metal Cap Co. Plastic spouts, Terkelsen Machine Co. Labels, Wheeler-Van Label Co.

DESIGN HISTORIES

Sugar bag

Just about the time news was released that consumers would be granted more sugar for their needs, the American Molasses Co., through its subsidiary, the Sucrest Corp., announced that Sucrest Sugar would be available to the trade and the consumer public in new 5-lb. kraft paper bags. These packages offer an opportunity to grocers to sell consumers single packages in return for rationing tickets, thus facilitating sales. The packages are sturdily made, printed in two colors and have a special patented easy-to-pour feature. An illustration of this feature is shown on the front panel of the bag and directions for opening the package properly are printed across the top.

Another selling advantage of this new sugar bag is the featuring of Grandma's Molasses as a wartime sweetner that is also a nutritious body-builder. Sugar-saving recipes are carried on the side panels and the offer of the new Grandma's Molasses recipe book aids the sales of an allied non-rationed product which may be used to replace sugar in many ways. In distributing this timely wartime package, the Sucrest Corp. is giving the public practical information on how to extend their sugar ration tickets by using recipes which call for both sugar and molasses. From the dealer's standpoint, these packages are not only convenient to sell, but they also stimulate the sale of molasses.

The back panel has a lively illustration of children and a caption which explains the special properties of molasses which make this food particularly valuable in the wartime diet.

Credit: Bags by Union Bag and Paper Corp.

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1. This is the new all-fibre can to hold motor lubricant, late development of the petroleum industry. 2. Comparison of the new with the old. Left, the latest innovation; right, the rapidly disappearing tin can. New product is considerably lighter in weight than the old one.

Fibre cans that hold oil

Success of the new fibre and plastic-lined can, developed by Macmillan Petroleum Corp. for motor oils and which eventually will be made available to the entire petroleum industry, is being watched closely by every manufacturer who must obtain a substitute for metal or discontinue the distribution of consumer packages for the duration.

This container is "'grown' on the farm and cattle range," according to Raymond S. Macmillan, president of the company which has developed it, because it is produced by processing of such raw materials as corn, other grains, flaxseed, tallow, animal tissues, bone and clay.

Body of the can is spirally wound fibre, 3-ply (.019, .026 and .016 gauge) made of regulation strawboard derived from vegetable fibre. Top and bottom are kraft-lined manila stock; the kraft is fused on.

Essentials of the development are three new compounds (formulas secret), all of them said to be impervious to oil and all three made from materials not now critical and which do not interfere with the synthetic rubber program. One of these adhesives is used to bind together the 3-ply, spirally wound paper from which the new containers are fashioned and to cement the tops and bottoms of the cylinder walls. Another is used to fix the labels to the container exteriors. The third and most important one is used to coat the interior by a process of flushing and swabbing. This is a tough and elastic synthetic plastic which prevents leakage of oil, it is said, even when the containers are subjected to rough handling or to wide temperature ranges. The inner coating is claimed to be structurally so sturdy that it could be removed from the paper casing and still have a structural form all its own. These adhesives are made by mixing the ingredients in the right proportions and subjecting them to heat under high pressure in the presence of a catalytic agent.

Developer of the chemical compounds is Albert A. Robbins, consulting chemist for Macmillan Research Laboratories. His previous achievements include work on the wrapper for Eskimo Pie, wrapping materials for bakery and for dairy products. It was packaging work on butter that brought Mr. Robbins into the field of lubricating oils. He had developed a packaging material which prevented butter from absorbing odors and becoming rancid when in shipment. This led him to work on a liner or coating which would resist the action of hydrocarbon products.

The inner coating is applied by the Macmillan people themselves in their own plants. The problem briefly was to get an adhesive with the necessary "tack" which would also be completely oil-proof and at the same time suitable for fabricating a spirally wound fibre can, which any container

manufacturer could handle satisfactorily. The coating developed will not only resist oil but is also sufficiently hygroscopic to affect any moisture which by chance may be in the oil.

The cans are said to stand up well under all tests. Structurally the can is so strong that placed horizontally it will withstand a pressure of 125 lbs. and perpendicularly about 300 lbs. When a blow torch was applied to this container, it took 50 seconds to cause a leak in the Macmillan can; similar test on an ordinary coated tin can for lubricating oil caused a leak in three seconds, according to the laboratory's test. It is claimed that temperature as high as 700 deg. F. does not affect the substance of the inner coating. Cans themselves have been heated as high as 300 deg. F.

Macmillan estimates that the switchover by their company alone from tin cans to the new all-fibre containers will save 10,000,000 pounds of metal in a year and that production of the containers needed for this single replacement will consume 10,000 bushels of corn as well as substantial quantities of other farm, range and forest products.

Spirally wound container bodies are now made by two fibre can manufacturers. The Macmillan company's own requirements will be supplied first and after that, production will be made available to the industry. Mr. Macmillan has been in Washington discussing the development with WPB officials and Senator Guy M. Gillette of Iowa, chairman of the Special Senate Committee on Utilization of Farm Crops.

In designing the new containers, the company's research and development laboratories have retained the full quart capacity but have reduced the diameter and increased the height to make for easier handling, particularly by women who are taking over more and more of the sales and service functions at filling stations. Actual contents of the can are a little more than a quart to compensate for the "cling." This is a desirable factor in motor lubrication, so that the consumer is assured a full quart.

The company now packs 12 containers to the carton instead of 24. This is also because of the (*Continued on page 106*)

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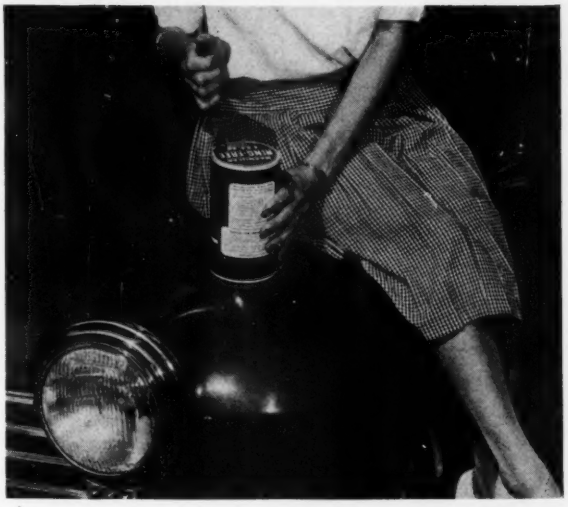

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3. Plastic lining of new container is pliable and will not shatter or crack. 4. Advantage of the container is that it is easy to open. Photograph shows an ordinary kitchen knife being used. 5. No more tin can dumps around garages and service stations. New fibre can is destroyed by incineration. Here they are being swept to a trash burner. 6. Fibre can in blow torch test withstands heat for 50 seconds; tin can burned through in three seconds.

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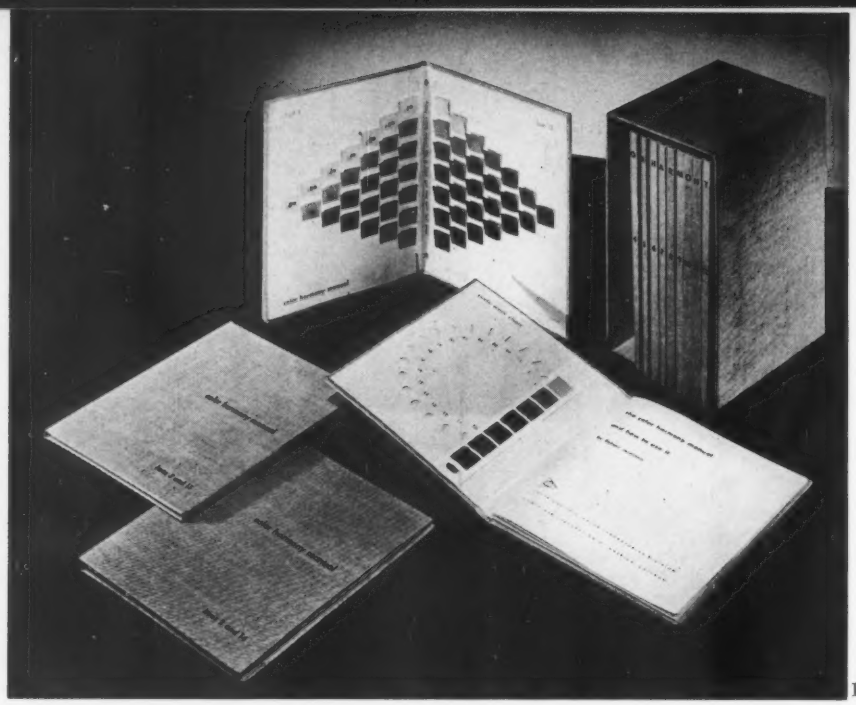


1. *Set, bound in linen, consists of 12 book-charts and one text book of simple explanation illustrated with diagrams. Each volume is marked on the back to indicate the colors it contains. These charts and book come in a linen-covered box.*

Color harmony manual

*by Egmont Arens**

Publication of the "Color Harmony Manual" and the "Color Harmony Index" is in line with the interest and progress in color standardization. Egbert Jacobson has produced a work of beauty and apparent scientific accuracy which should prove of practical use to those interested in color as applied in the field of packaging.

The work is based on the color theories of Wilhelm Ostwald, a brilliant scientist and a Nobel Prize Winner. Ostwald maintained that greater simplicity could be achieved by the expedient of divorcing his system of applied color from the realm of spectral physics. He contended that the concepts developed by the physicists in their analysis of the visible spectrum might be a hindrance rather than a help in the everyday application of color, which in a majority of cases is reflected color as it affects the human eye. His thesis was that every color recognized by the human eye could be produced by measured quantities of hue (the chromatic element) and white and black. According to Ostwald, "the three components of any color, namely, the full color (bearer of hue), the white content and the black content can be accurately measured."†

This is the basic difference, Jacobson claims, between Ostwald and other color systems patterned after Helmhotz, such as Munsell. Ostwald's system was developed in the pattern established by the scientist Ewald Hering (1853) who contended that the concepts of purity (chroma) and brightness (value) are divorced from "the actualities of our daily light sensations and the experiences of painters and dyers."† In comparing the two systems, it should be borne in mind that the Ostwald system measures color by determining the content of hue, black and white; whereas the Munsell system measures color by introducing spectro-metric factors which both Hering and Ostwald believe to be irrelevant in ordinary, everyday color usage.

The colors in Jacobson's "Color Harmony Manual" and "Color Harmony Index" were developed by Carl E. Foss, formerly of the International Printing Ink laboratories, from colorimetric specifications and are the result of exhaustive spectro-photometric measurements on the intricate photo-electric machine developed for color measurement by Professor Arthur C. Hardy at Massachusetts Institute of Technology. The current work is an exposition of Ostwald's ideas of accurate color measurement and is an important expression of color theories that are held by many experts.

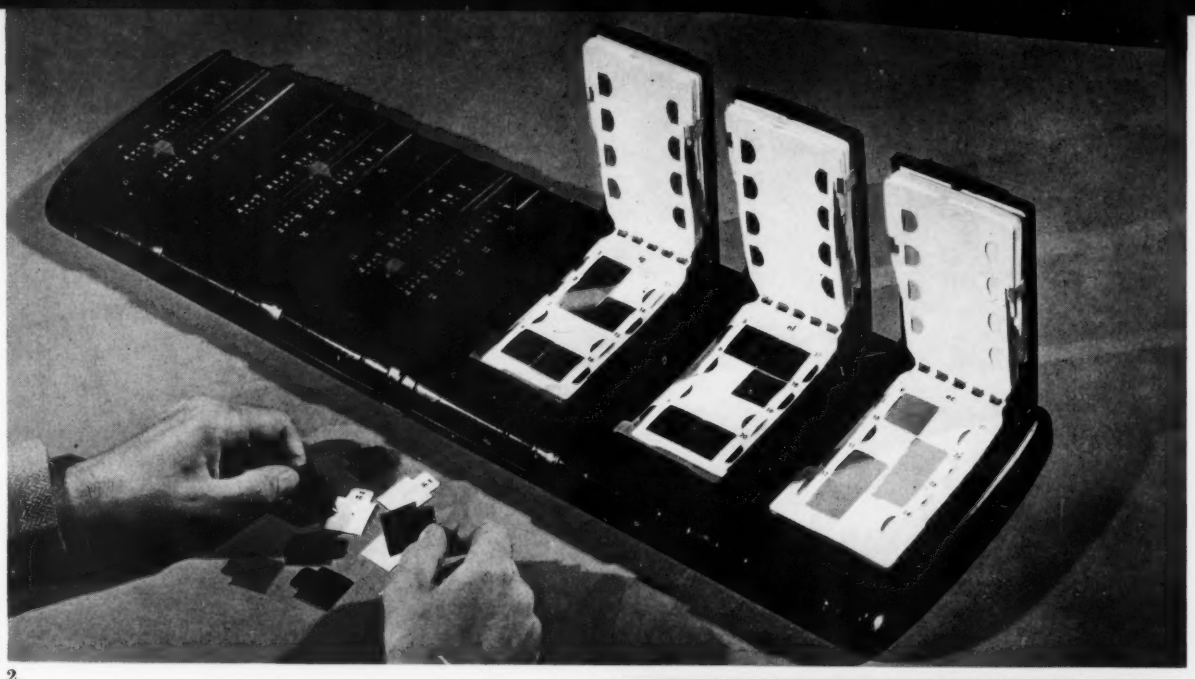
As a system of industrial and artistic color standards the Jacobson work has much to recommend it. The circle of hues is divided into 24 colors "of equal valence." As Jacobson applies it, this means that these 24 colors are spaced equidistantly around the circle with no wide gaps for the eye to bridge between colors. The interval between each numbered color and the adjacent color is just enough to make it easily recognized, yet not so wide as to develop omissions. (Originally Ostwald developed a circle of 100 colors, but condensed it to 24 as the intervals of the larger circle were so close together as to be almost indistinguishable, and thus impractical for everyday use.)

Ostwald achieved symmetry in his color arrangements by insisting that visual (not theoretic) complementaries should be opposite each other in the color circle. Everyone remembers the old method of finding the complement of a color by staring fixedly at a colored swatch for a moment and then closing the eyes. If this method is tried on Ostwald's color circle it will produce an after image exactly like Ostwald's opposing hue.

There is no space here to go into the matter of symmetry and balance of Ostwald's color solid and the complicated series of systems within systems that it contains. There

* Package and Industrial Designer.

† Quotations are from "The Development of Color Theory Since Newton," by Wilhelm Ostwald, published by Fogg Art Museum, Harvard University, 1934.



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are, for instance, the 28 circles of equal valency like the circle of hues described above. Then there is the series of greys between black and white. The monochromatic triangle is a thing of beauty, as are the systems of isotints and isotones, and the shadow series, and the isovalent circles. One must read Mr. Jacobson's lucid text to get the full flavor of these interwoven systems of tints and shades that hang together in a manner reminiscent of the grandeur and precision of the heavenly solar systems. After one has explored these systems for a time, color harmony seems to be at the finger tips or better yet, absorbed into one's being.

The artist, the designer—or for that matter anyone who works with the practical applications of color—will study this material with keenest interest.

The "Color Harmony Manual" consists of 13 handbooks, one of which is a text written in a clear and interesting style explaining the Ostwald theory and telling how the charts may be used. Twelve of these volumes are filled with charts containing the 680 movable color chips, one side of which is glossy, the other side dull. True, the precise physicist may insist that texture is not an attribute of color as such; but from the point of view of its practical (*Continued on page 106*)

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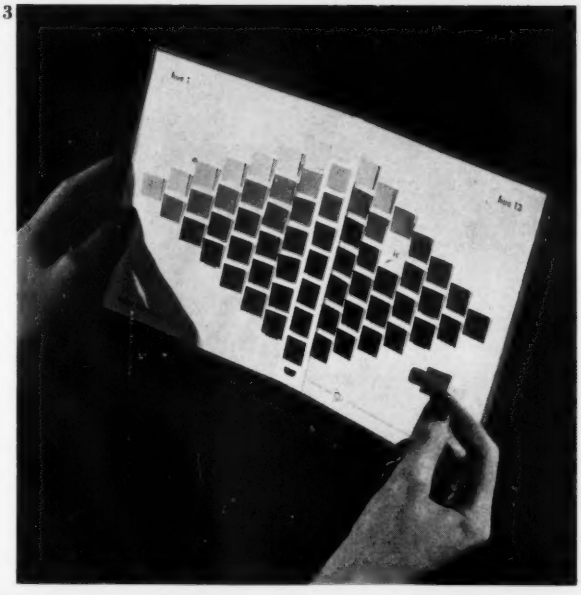

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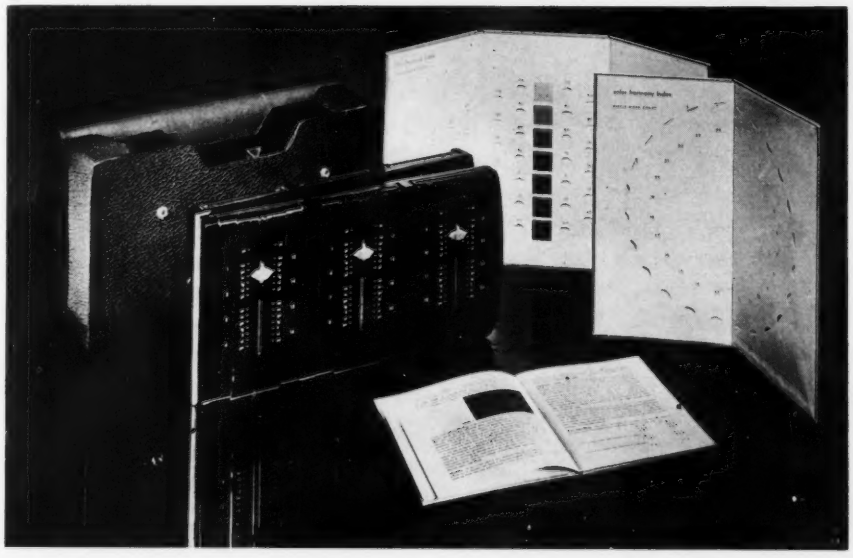


2. Press the button and the cover snaps—and the color selected appears. It may be taken out to compare with the remaining 679 or to match it with other surface colors. 3. One of the 12 book charts. It contains the number 1 of a color with number 13 hue monochromatic triangles with 27 variations of each hue as it is modified by the addition of white and black. 4. Specially fitted leather case with index, chart and book.

War standard for color

American Standards Assn. recently approved what it calls the American War Standard for Specification and Description of Color. These specifications are based on use of the spectrophotometer as the method for determination of those characteristics of an object which relate to its color. (See also article on "Color Harmony Manual" on page 54.)

The foreword of the bulletin in which this standard is published states that spectrophotometry has been an accepted method for almost half a century. It points out the obstacles in the use of this method and how these may be overcome:

"The chief criticism of this basic system of color specification has been due to its technical character, very little provision having been made for its interpretation in familiar terms. This limitation has been overcome in the present standardization by recognition of the correlation between the basic system and the useful and readily comprehensible system of colored samples embodied in the 1929 Munsell Book of Color. Reference to the Munsell Book of Color, supplemented by the basic specifications of the colors exhibited therein, provides a convenient, readily comprehended interpretation of the basic specifications and facilitates their visualization. This is especially important for those who are not familiar with the basic specifications of color. Used in this manner, the 1929 Munsell Book of Color bridges the gap between the aesthetic and qualitative comprehension of color employed by artists, designers and the general public, and the basic specifications employed by and necessary for the purposes of science and industry.

"When a numerical specification is undesirable, the use of a correlated system of color names adapted from common language and proposed by the Inter-Society Color Council is recommended. This system of color names has been defined in terms of the Munsell system and provides a literary method for the description of color where general comprehensibility is desired and precision is not important."

The text of the American War Standard is as follows:

1. PURPOSE

To recognize and recommend a basic method for the specification of color and to facilitate its popular interpretation.

2. PROVISIONS

2.1* The spectrophotometer shall be recognized as the basic instrument in the fundamental standardization of color.

NOTE: Specifications of the spatial distributions of the incident and collected light are essential to the standardization of spectrophotometry. Until standard conditions are established by agreement, the particular conditions employed in each instance should be stated clearly.

2.2* Color specifications computed from spectrophotometric data shall be found by means of the standard observer and coordinate system adopted in 1931 by the International Commission on Illumination.

In the absence of a special reason for adopting some other illuminant in reducing spectrophotometric data, standard ICI illuminant C., representative of average daylight, shall be used.

The basic specifications of color shall consist of the tristimulus value, Y, and the trichromatic coefficients, x and y, of the ICI coordinate system, or they shall consist of the tristimulus value, Y, and the dominant wavelength and purity.

NOTE: Dominant wavelength and purity are obtainable by computation from the trichromatic coefficients, x amd y. Several methods of expressing purity have been proposed and used to some extent. In this standardization, purity refers to the quantity which is called excitation purity in discussions of the several possible purity scales. For the sake of uniformity, the symbol, p, and expression in terms of per cent is recommended for purity. Likewise, when Y is specified in terms of reflection factor it should be expressed in per cent, symbol, R. It is customary to express dominant wavelength in millimicrons, μ, and this practice is recommended, together with the symbol, λ.

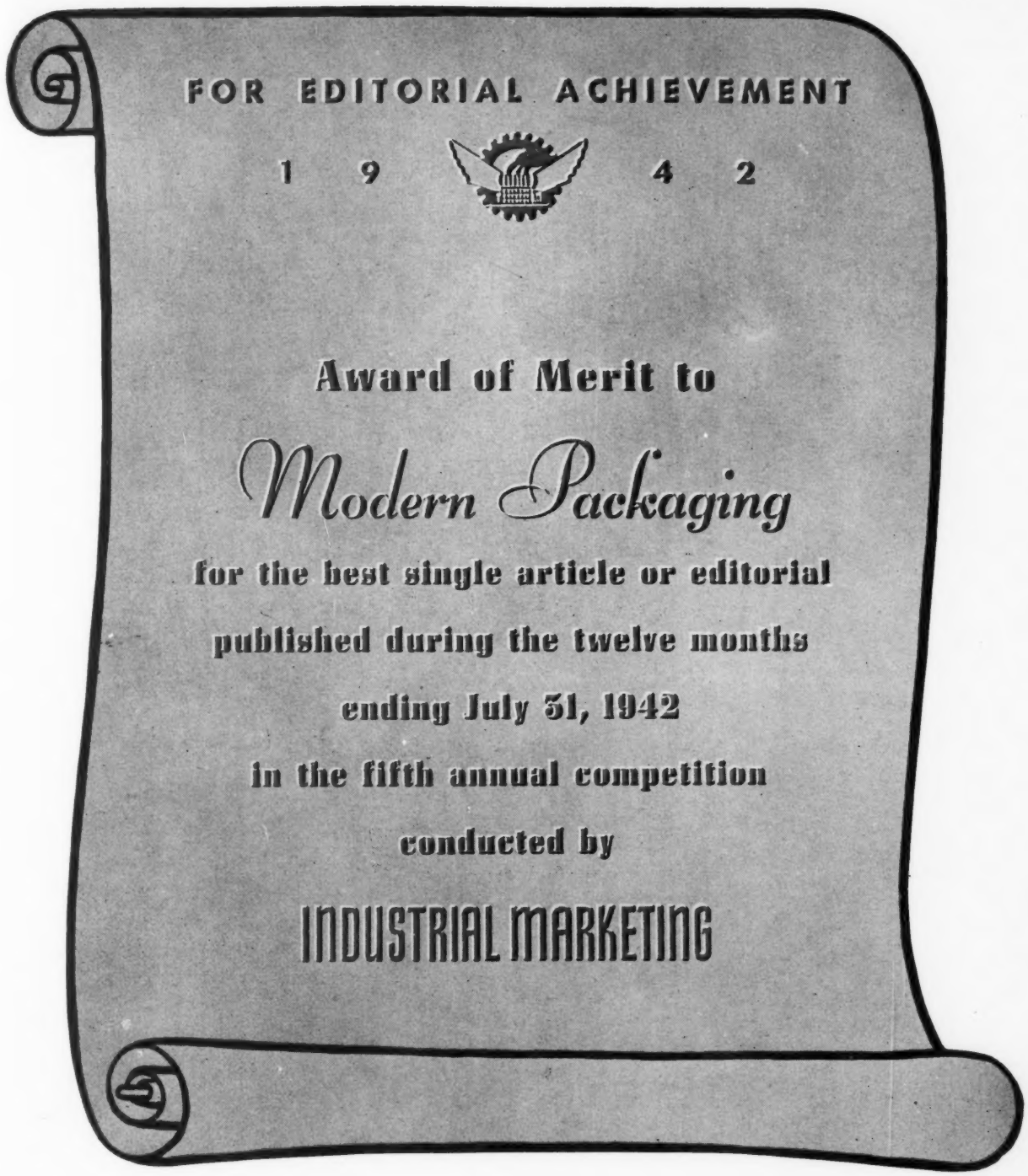
2.3* For the popular identification of color, material standards may be used. The only system of material standards that has been calibrated in terms of the basic specification is represented by the 1929 edition of the Munsell Book of Color. The use of this book is recommended wherever applicable to the specification of the color of surfaces. Approximate identifications of Munsell hue, value, and chroma may be secured by direct visual comparison with the samples in the 1929 Munsell Book of Color. When the most accurate visual comparisons are needed, the mask method is recommended. Wherever more exact Munsell notations are desired, they shall be found from the basic specification, Y, x and y by interpolation among the smoothed curves for Munsell hue, value and chroma.

NOTE: Most surfaces whose colors fall outside the range covered by the samples of the 1929 Munsell Book of Color cannot be assigned Munsell notations by reference to the smoothed curves. For such surfaces, for transparent media and for illuminants, only the basic specification Y, x and y, or Y, dominant wavelength and purity are recommended.

2.4 A descriptive name according to the ISCC-NBS system of color designation may be derived from the Munsell notation. This name is recommended wherever general comprehensibility is desired and precision is not important. The use of color names for color specification is not recommended.

NOTE: It should be emphasized that the ISCC-NBS names are descriptive only and are not adapted to sales promotion nor intended to replace names that are developed for that purpose.

* The alternative, but coordinated sytems of color specification described in 2.1, 2.2, and 2.3 are each adequate for specification of color tolerance in those cases for which each system is useful and convenient. As in all engineering specifications, the tolerances in different industries vary and depend upon the uses for which the products are intended. Color specifications according to 2.2 and 2.3 are, strictly speaking, appropriate only for products viewed by normal vision, but in the absence of agreement on standards for anomalous color vision or vision at low illuminations no more appropriate color specifications are available.

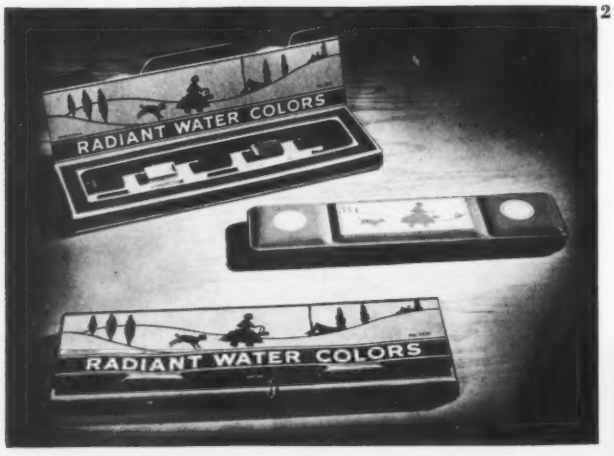


THE Industrial Marketing Award for Editorial Excellence was given to Modern Packaging for the best single article in any business paper—"Plight of Paper" in the July, 1942 issue. This, we feel, is really an award to our readers—editors and publisher can be only as good as their audience—and so we publish the plaque as a re-dedication of our desire to serve every readers.

We appreciate this Award. We would, however, like to add a thought to the impression that the singling out of one article might give. "Plight of Paper" is not singular from our point of view. Rather, it is typical of the editorial content, and we promise continued adherence to the editorial policy of which it is an integral part and continued service for our readers.

PACKAGING PAGEANT

1 This box for Varva face powder solves the problem of keeping fresh puffs always conveniently at hand. At either end of the box space is left for several small puffs between the inner powder container and the walls of the box. Puffs when left loose in the powder scatter it over dresser top when taken out to apply make-up. With these special compartments, the Varva box supplies a handy, neat way to keep powder and puff together. The paper set-up box is octagon shape and is in two colors. Powder box made by Imperial Paper Box Corp.



2 The traditional small water color set has joined the many civilian articles which are now made of non-critical materials by changing over from tin to paperboard. This is the new box adopted by Art Crayon Co., Inc., for their sets of Radiant Water Colors. The original design has been rearranged to fit the new material and an especially clever opening and closing device has been created. A slight pull and the box is open—a little pressure and it is closed and locked. This is a good example of progress in structure and design which has grown out of the scarcities of the times. Box designed and made by Robert Gair Co., Inc.

3 Purity brand paperware—forks and various size spoons—for picnics, old-fashioned box suppers and the like come packed in these blue and white cartons. A special tab-like lock of the paperboard keeps the spoons and forks intact and permits reclosing for storing any that may be left over. Top panel of the cartons has an illustration of the spoon or fork in actual size, thus letting the shopper know just what the contents are. This keeps her from opening the box and handling items. Cartons and contents made by Sutherland Paper Co.

4 Shortly after the government's announcement of V-Mail for men in the U. S. services abroad, the W. A. Sheaffer Pen Co. introduced V-Black Skrip, an ebony black fluid that insures good photographic reproduction. The government system of photographing mail on film and flying the film to distant points, reproducing the letter in one-fourth size at destination, has met with wide acclaim. The saving in cargo space is illustrated by the fact that one 100-ft. reel of 16-mm. film will carry letters that ordinarily would fill two large mail bags. Sheaffer's V-Black was created to fulfill a particular need and special labels and cartons were designed to explain at a glance the purpose of the ink. The new carton is red on top to catch attention with the trade name in black on a white band beneath. Cartons by Consolidated Paper Co. Labels by Frank G. Shuman Co.

5 Pond's "Lips" is a new inexpensive gift packaged lipstick which the service man can send to his best girl. The little kit is all ready to mail, with printed indications for stamps and address. The lipstick is attached to a card on which are a message and several clever and timely drawings.

6 These three packages with amusing soap sculptures and small wooden scoops tied on to them were created by Tre-Jur to satisfy the demand for children's bubble bath sets. Tall, brightly colored set-up paper boxes and a fibre can, tightly wrapped with green checkered paper, were filled with bubble bath. Soap sculptures of a dog and of children were attached to the containers by means of strips of transparent adhesive tape and ribbon. Containers by Belmont Paper Box Co., Inc.

7 Pre-tied ribbon bows for girls are being merchandised in a novel and effective manner by Stark Bros. Ribbon Co. Four cards lithographed in full color and each featuring a different branch of our armed services—Army, Navy, Air Corps and the Coast Guard—are die-cut in various places so that bows of varying colors and different sizes can be attached by means of a bobby pin. The lithographed cards provide an economical method of packaging the bows and make excellent product display pieces. Cards made by The Forbes Lithograph Co.

8 The news about this Park & Tilford lipstick is that it has a plastic container and sells for 25 cents. With its introduction, Park & Tilford brings the lipstick with this type of container within the price range of the "five-and-dime" and variety stores. It is light-weight, approximately the same size as former ones made of metal and the lipstick operates on a swivel. The top is of royal blue in a mottled effect and the bottom is of bright red. For sale on the counters of syndicate, variety, drug and department stores, the lipstick is carded for better display. Material for lipstick container by Tennessee Eastman Corp.

9 A number of the leading milk companies are using these bottles with various patriotic slogans and designs. There are some 20 designs available in red and blue with slogans such as, "Buy War Bonds," "10% Everybody, Every Pay Day" and the like. Application is made on the bottles at the time of manufacture by the color lettering process. This process fuses the design into the glass so that the color never fades and the design cannot rub off or become obliterated even after long and hard usage. Bottles made by Owens-Illinois Glass Co.

(Left) Metal container formerly used for cocoa by Hershey Chocolate Corp. (Right) New paper container adopted as a wartime measure. Essential brand identity has been retained, but visibility is improved by use of white lettering to replace aluminum ink formerly used.

Cocoa in paper

Hershey Chocolate Corp. is among the first in the trade to adopt a new wartime paperboard container to replace the familiar tin-plated steel container used for years in the packaging of pound and half-pound units of cocoa.

This move, alone, will release annually for war production uses at least 7,500 tons of steel, more than 200,000 pounds of block tin and large quantities of aluminum, according to William F. R. Murrie, who is president of the Hershey Chocolate Corp

The new container was developed by I. H. Slesser, general purchasing agent for the company, in collaboration with the package material suppliers. The container is made of paperboard which has a lining of protective paper laminated to the inside of the box. The same kind of plug-type closure is used on the new paper container as that used on the old metal container. The only metal on the new carton is the closure.

On production lines, the new container can be handled in the same way as the old one. The same automatic machinery used for the former tin containers is used. This made it unnecessary to go out into the market for new equipment at a time when there is little new equipment and when every manufacturer is being asked to get along with what he has to save metal.

Essential brand identity of the old package has been retained for the new design, but the new package is an improvement in that it provides greater shelf visibility. This is because of a new color scheme of white lettering, instead of aluminum against a maroon background. This is also a metal-saving move. To assure correct use of the product as well as new uses, reverse and side panels of the carton are devoted to recipes.

In addition to the substantial savings in steel, tin and aluminum made possible by the adoption of the new package, its use also will release considerable freight capacity to war industries. This is because the new paperboard containers weigh much less than the former tin containers. The company estimates the new packages would call for 5,000 less tons of freight capacity.

The new paper liner is said to have retained the fresh cocoa flavor and will protect the product over long periods. According to all preliminary tests, the product should have excellent shelf life.

This is Hershey's second first in wartime packaging. This company was one of the leaders in replacing the use of foil on its familiar chocolate bars with a glassine wrap.

As the demands of war make necessary more and more paper packaging, the experience of those companies which have had to change their packaging materials and methods provide a valuable reservoir of information for makers of other products who must seek new packaging.

Credit: Containers by Container Corp. of America. Protective lining by Riegel Paper Corp.

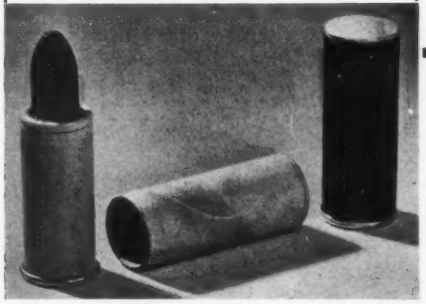
Keep 'em Rolling

YOU can't kill Fascists with lipsticks, and you can't win a war with morale—but it's all to the good if you can keep up morale and business, and, at the same time, free an important segment of our manufacture to produce the weapons and ammunition for the front lines.

The paper lipstick container, utilizing no critical materials, which Burt engineers developed, is a contribution on the civilian side toward our ultimate victory. Complete with screw propel-repel arrangement, the ends are made of either vegetable ivory or plastic sheeting—both available.

Ladies can have their lipsticks—and lipstick manufacturers can use their metals and machines to help smear the Axis.

This is one example of how Burt's ingenuity, resources and resourcefulness are helping American packagers to "Keep 'em Rolling" under wartime shortages. The same creative service is available to all Burt's customers in peace and in war. Other examples will appear in subsequent issues of Modern Packaging.



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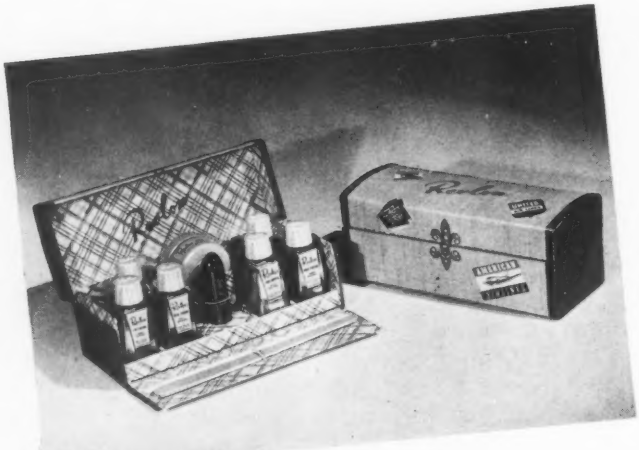
A. G. Spilker, P. O. Box 126, Telephone: Danville 27

LOS ANGELES: 1709 West 8th St.—Telephone EXposition 0178

CANADIAN DIVISION: Dominion Paper Box Company, Ltd.
469-483 King Street, West, Toronto 2, Canada

Cosmetic kits hit wartime stride



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Elimination of nearly all metal fasteners, bottle grippers and ornaments and the use of non-critical materials mark Revlon's 1942 line of holiday gift sets as the products of wartime ingenuity. Clever ribbon pull-through closings are arranged to hold down flaps and protect contents. Elasticized fabric, which uses no rubber, is sewed in kits to hold bottles securely to the platform. Another innovation is the sterling silver ornament which adorns the velvet jewel box. Another feature of the sturdy, medium-priced kits is the use of a wide variety of fabrics for coverings.

These distinctive gift sets have long been a specialty of Revlon. Among the very first manufacturers of cosmetics to create and stress the importance of the manicure kit, the company has always geared its line to the trend of fashion. Colors, fabrics and the year's styles have been carefully studied so that when the new holiday sets appeared on the market they were always in keeping with current modes. With this year's line, Revlon has had to cope with the many restrictions on packaging materials made necessary by the war. Nevertheless, the sets are unusually smart and timely. Although the list of non-critical materials may grow shorter week by week, Arthur G. Alter of Revlon, who is responsible for the designs of the kits, feels that limitations in materials can be balanced and offset by an abundance of ideas for using those which are available.

When the company first began making sets a number of years ago, they followed pretty much the generally accepted pattern for manicure sets. They created a Christmas holiday line of fabricoid cases which held various selections of manicure items. The cases were made as attractive as possible, but no great effort had gone into developing unusual shapes and sizes, to adapting a wide range of materials to effective

1. Miniature trunk with travel labels is covered with a straw fabric from Madagascar and is lined with red plaid paper. 2. Sheepskin leather kit is lined with rayon in a contrasting color. Tab and slot of the leather make the fastener. 3. Pitcher bag made entirely of a wooly fabric is lined with checkered rayon. A ring made of plastic holds the top of the bag closed and the handle is of fabric. 4. Sheepskin saddle leather is made with a rayon lining of the same color to give the effect of an all-leather case.

packaging treatments. It just hadn't occurred to makers of cosmetics at the time that manicure sets could prove a source of endless ways of arousing interest in their products.

Then Revlon began to experiment. They weren't satisfied with just grouping a number of articles together and placing them in a box or case. Sets made up in this way seemed to lack something, to need a tow-line that could be attached to a definite objective. The trouble with manicure sets, they finally decided, was that they didn't change with changing fashions. Women changed their hair styles and accessories, their make-ups, the colors of their clothes, shoes and gloves, the fabrics they wore, but sets for nail care remained practically the same from year to year. So Revlon originated some manicure sets with a fashion angle. In the beginning just a few thousand sets were made up for the Christmas trade. The company wanted to test its theory to see if it worked. It did. Those several thousand sets bounced off the counters of departments stores and into the homes of consumers in record time.

The next time the firm came out with their line, they were braver and increased the number of sets by several more thousand, only to have them sell again in much less time than they had anticipated. Officers of the company were now convinced that sets of nail care products, properly styled, could be year-round best sellers. They made the holiday gift line of manicure sets an outstanding feature of the business and concentrated on originating unusual and distinctive packaging for the different groups of products. As a result, sales of these sets have increased rapidly from year to year. Now, because of long experience with using materials not ordinarily thought of as packaging possibilities, the company is able to create a highly successful line in a war year when packaging has become so greatly involved with shortages and restrictions. Revlon in planning its line for the current season starts with price. Each set is created around a definite price and these prices are grouped in three fairly general divisions—low, those sets selling for a dollar to around three dollars; medium, sets around five dollars; and expensive, those that are in the luxury class and are priced from ten dollars and up. The company figures carefully the cost of the sets in the different price ranges and then estimates what its margin of profit must be. The sets give every store something to talk about and something to feature in displays, thus promoting the sale of individual Revlon items. Certain products of the sets are used up before others, and because the sets are attractive, well made and hold standard sized containers, the owners of kits keep them replenished.

Once a price has been established, a package is designed within that particular range. Selection of a suitable covering for the package design chosen does not involve an immediate search through the markets. On the contrary, Mr. Alter reports, Revlon knows exactly what coverings are available, are practical and will be most effective. To this familiarity with the fabric market, not only the better known types of fabrics, but also these unique (*Continued on page 112*)

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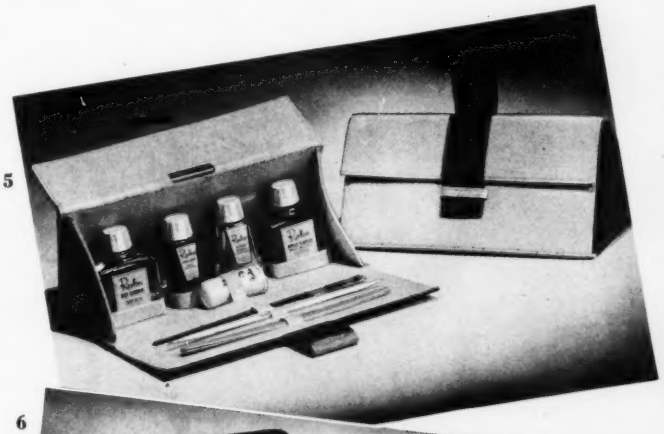

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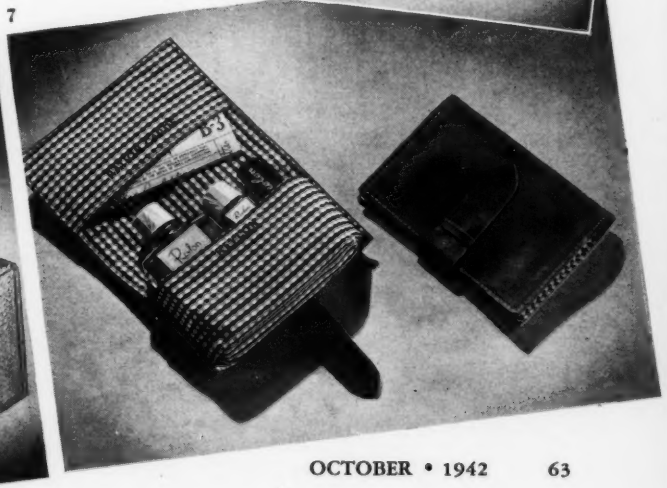

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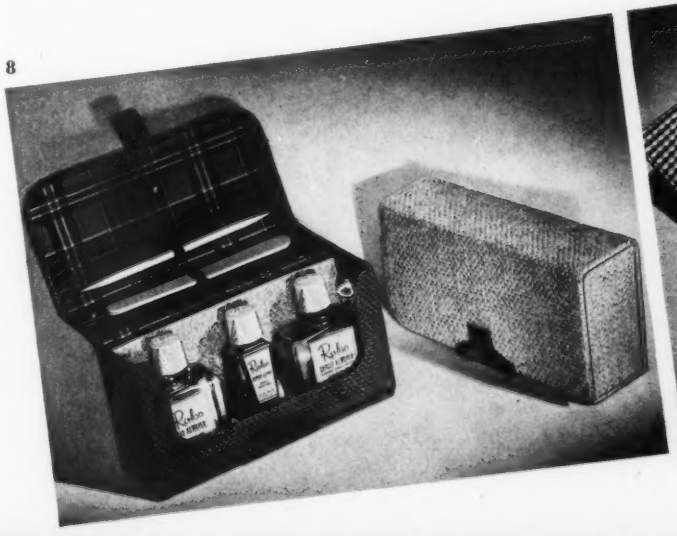

5. A kit of contrasting materials and colors. It is covered with rayon repp, lined with rayon shantung and comes in rich red with blue, blue with red and rust with eggshell. 6. A sterling silver ornament is used on this case of rayon velvet with celanese lining. Manicure articles are fastened on two leaves which may be removed and the base used as a jewel box. 7. Kit of leather, lined with checkered rayon has a separate pocket for the owner's ration card. 8. Sturdy kit is covered with cotton monks cloth.

Old and new packages for Kem-Tone. Note complete change in labels of the new cans and jars on the right.

Paint for brush-loving amateurs

In the July issue of Modern Packaging, there was an article on the metal-end fibre can developed by the Sherwin-Williams Co. for many of its products. The company has been in the process of re-packaging its entire line of paints for a number of months and as containers are satisfactorily tested, the products are introduced on the market in them. The fibre can with the metal ends was one of the new wartime containers developed by Sherwin-Williams. After it had undergone sufficient testing this can was found practicable, affording adequate protection and was a great metal saver—the last, the basic motivation for the can's development.

Now, the company is re-packaging its new and commercially successful Kem-Tone. This product is a specialty paint that is thinned with water, recommended for painting over wallpaper or almost any other surface without a priming or sizing coat. It is advertised as readily washable and to have "no objectionable paint odor." In short, it is made to order for the amateur decorators who want to do a job of painting at home.

But, Kem-Tone, strangely enough, cannot be packaged in those fibre containers which had proved so successful for other types of the company's paints. Unlike the regular kind of paint, it soaks into the fibre in time. So Sherwin-Williams is continuing to use metal cans for the gallon size of Kem-Tone and is bringing out a new glass jar for the quart size.

But the amateur decorator's problem was not solved completely with new containers. The materials situation has affected the home painting business in another way. Paint is not much good without something with which to apply it. Brushes are scarce and getting scarcer, because the bristles that used to be imported from China are not coming through as they did before the war. The small amount that does manage to trickle in from China with great irregularity, comes nowhere near being adequate to supply the need. Then, too, the Chinese and their enemies are rapidly diminishing the source of supply by eating it. In other words, it's a case of not being able to have your bristle and eat it, too. To meet this situation of lack of brushes, Sherwin-Williams has devised a substitute for the paint brush. The company calls it the "Roller Koater."

It is a roller as its name implies, with a handle that at-

taches to the right end. The painting surface is a rug-like fabric. All the user has to do is to put the water-thinned Kem-Tone in a flat pan, roll the roller in it and then roll it on the wall.

The Roller Koater is wrapped in a yellow and blue paper wrapper which corresponds in color and design with the new Kem-Tone label.

"For centuries," according to a recent issue of the Sherwin-Williams employees' magazine, "paint has been applied by a brush, but last spring for the first time in history, paint was applied by a simple gadget developed by Sherwin-Williams."

The roller itself uses few critical materials. It is made of wood, wire and jute and it has an inner cushion of reclaimed rubber. These rollers come packed six to a carton and the unit retails for 89 cents.

For the user, the Roller Koater presents a major revolution in painting methods, but for the company, perhaps an even more important revolution has taken place in the design of the Kem-Tone packaging. For the first time in the history of Sherwin-Williams, the new label and the new cardboard carton for the quart jars of the paint do not feature the Sherwin-Williams name. The only name given spot attention is Kem-Tone.

The product is distributed not by Sherwin-Williams alone, which has its headquarters in Cleveland, but eight affiliated companies also act as distributors of the new paint. The company feels that Kem-Tone has almost unlimited possibilities of wide usage, so it has placed its distribution on a fairly broad base. Retailers are not given any "exc'usive." The paint is a specialty that can be sold to everybody by anybody who may want to get into the paint-selling business. However, there is this exception—the company plans to control the retail selling price where such practice is permitted by state law and to eliminate the paint's use as a "loss leader," in certain undesirable competitive practices. Consequently the label carries the name, "The Sherwin-Williams Co.," after the names of its eight affiliates in the same size type as that for the other companies. These distributors are spotted fairly generally over the United States, so that sales promotion for the new product can be done adequately and consistently for each of the various sections of the country.

The carton that is being used with the new quart-glass jars of Kem-Tone is a bright yellow with blue lines and blue, red and black printing. Copy carried on the carton emphasizes, "No muss, no fuss, no bother," and there are a number of helpful suggestions given on the use of the product. These cover the subjects of what to do about cracks, broken corners, repairing plaster walls, old painted walls, peeling paint, brushes and how to wash brushes. Instructions on the application of the paint are given in four easy steps that even the most amateur of home painters can understand.

The carton also advertises two related products—the Roller-Koater, described previously, and Kem-Tone Trims. These latter are strips of decorative wallpaper borders in 2-in., 3-in. and 4-in. widths, colored to harmonize with the Kem-Tone colors and ready gummed for easy use. Carrying out the theme that these paint products are washable, the copy for the borders reads, "Just dip in water and smooth into place. Available in a variety of color-fast patterns—and they are washable!" The carton itself has a high gloss finish which is resistant to finger marks, does not soil easily and may be wiped off with a damp cloth should the surface become dusty. A package of this kind, which keeps its fresh appearance at all times, is welcomed by the dealer.

Sherwin-Williams' new adventures into packaging materials and new labels run parallel to the idea behind the new product itself—customer appeal. The company believes it is good business to emphasize its (*Continued on page 108*)

Posters, illustrating the use of the paint and telling about the company's allied products.

Bail-out ration

New "bail-out" ration for Army flyers and aerial gunners is a pocket-size, featherweight package that contains enough nourishment to satisfy a soldier's hunger for at least a day.

This package, about $4\frac{1}{2}$ by 4 by 1 in. is small enough to hold in the palm of the hand and weighs only $8\frac{1}{2}$ ounces, just the right size to fit easily in the soldier's pocket. It is intended primarily for flyers whose planes are disabled in mid-air. It was developed by Quartermaster Corps subsistence experts in Washington in cooperation with Air Force authorities.

The package is a carton treated with heavy wax coating to make it proof against grease, dirt, insects, moisture and gas. Inside are two vitaminized chocolate bars wrapped in protective paper. Two small cartons of dextrose tablets, one heat-sealed cellophane packet of bouillon powder and two sticks of gum.

An interesting feature is the opportunity that has been given various firms who have done the packaging and supplied the products for the ration to display their company names on the ration. On one side of the sample unit sent to Modern Packaging from the Office of the Quartermaster General was printed, "Packaged by Wm. Wrigley Jr. Co." On top of the dextrose tablet cartons was printed, "Mfd. by Curtiss Candy Co." On the U. S. Army Field Ration D (that's the chocolate bar) it said, "Prepared by Peter Cailler Kohler Swiss Chocolates Co., Inc." The bouillon powder was "Packaged by Miles Laboratories, Inc." The Wrigley gum was in its familiar civilian consumer wrapper. Such familiar trade identification will not only help American industries to keep their names before the men in the armed forces, but may even prove to be pleasant reminders of the home country to the soldier who opens up the ration in a foreign land.

While the "bail-out" ration has many features in common with the recently developed K ration, it should not be confused with the latter. Both contain the same products, but the Ration K weighs about 32 ounces and contains many other concentrated foods which the "bail-out" ration does not.

Uses of the two rations are inter-related yet different. Planes designed for troop transport or combat duties are packed with Ration K and if the plane lands under satisfactory conditions this food will take care of the occupants' needs for several days at least, according to the Quartermaster news release.

It is when the occupants (*Continued on page 110*)

Cannon keeps gift line before public

How limited quantity of merchandise for civilian markets may take a toll in luxury packaging lines is indicated by the announcement that Cannon Mills, a consistent winner in All-America Package Competitions, will have only four gift boxes in its 1942 gift line of towel sets. Last year this line contained 18 different sets. This year's line is the smallest since the company started these gift sets in four boxes in 1936.

The reason for this reduction is not a shortage of packaging material for boxes, but because the looms normally used for the production of towels for the bathrooms of American homes are now weaving towels for the millions of men in the armed services. Just how much of Cannon's towel production is going for the military the company could not state, except to say that the lion's share of the mills' production is in war work.

In spite of the reduced amount of merchandise for the civilian market, however, the company decided to keep the gift line alive, no matter how small. This is with an eye to the future—to keep this line before the buying public for the time when the war is over.

The four boxes, illustrated here, carry out the same color feeling of previous years and although there are only four, the designs and colors have all been selected so that they will harmonize in any type of mass display in which they may be arranged. There are two packages in the under-two-dollar price range and two under three dollars. These prices were selected from past experience of what was most popular.

There are two hinged-cover rectangular boxes, one round one and one oval-shaped box. Flower motifs have been used for the cover paper designs on all of them. Construction is somewhat simpler than might have been selected had the boxes not been designed to save board at the time of the paper shortage scare. There is an absence of yellow, because it was felt there might be a shortage of yellow printing inks. Added interest is afforded by a skillful use of ribbons and decorative flowers in interesting patterns.

Credit: Designed by Dorrit Osann. Boxes by Old Dominion Box Co. and High Point Paper Box Co., Inc. Wraps by Zeese Wilkinson Co., Inc. Silk Screening by The Chromart Co.

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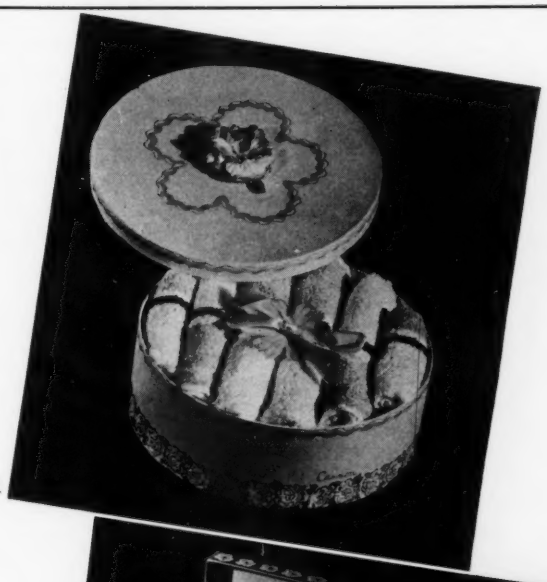

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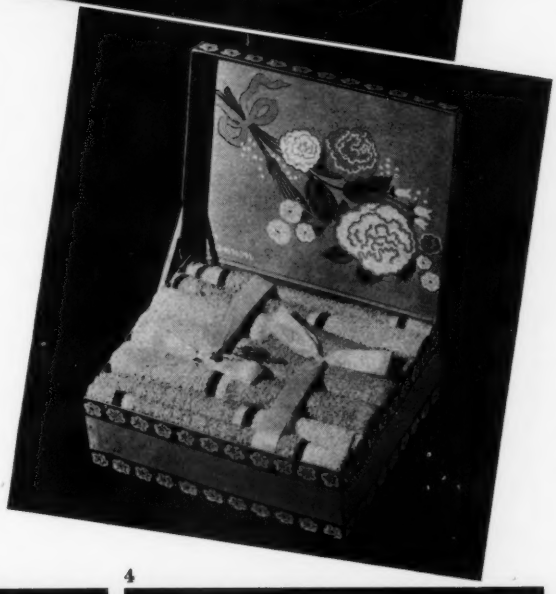

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1. "Princess" contains 4-piece towel set in bon-bon shape box of shell pink, wild roses on cover. 2. "Coquette" contains 4-piece set in aquamarine hinged-cover box with brilliant flower sprays. 3. "Apple Blossom" is 6-piece set in hinged cover box, soft green background. 4. "Bonnet Box," a 6-piece set in oval box of hyacinth blue lined with American beauty, matching the velvet ribbon on cover rim. Rosebuds nestle in ribbons which tie the towels.

Industrial "concentration" in Britain

How requirements of war economy encroach further and further on civilian production with a consequent effect on packaged goods is revealed by the British Information Services in a résumé of a pamphlet, "Concentration of Consumer Industries and Trade in Britain."

Britain has initiated a new policy in connection with the production of goods for civilian consumption, the news item stated. From now on, the resources available for civilian production in Britain are to be increasingly concentrated on the manufacture of standardized "utility" articles. "Utility" clothing is already a pronounced success and the government is planning "utility" furniture, pottery, holloware, umbrellas, pencils, cutlery, suitcases and many other civilian articles.

Britain's wartime policy for civilian goods may now be seen to fall into three stages. In the first, "limitation controls" were put on the total amount of raw materials to be used and on the total amount of civilian supplies. In the second—"concentration of production"—factories producing civilian goods were drastically cut in number. In the third and perhaps final stage, standard fixed price "utility" goods are produced in a quantity calculated exactly to satisfy essential civilian needs.

When Oliver Lyttleton, then president of the Board of Trade, introduced his concentration plan in 1941, production for civilian needs had already been very severely curtailed through government controls over raw materials and through the "limitation of supplies orders." Through these orders, factories making civilian goods were only allowed to supply retailers with a dwindling percentage of their previous supplies. In practice many civilian factories became engaged partially or wholly on war orders: some were working part-time on their former products, and some had closed down. The concentration plan was designed not so much to limit total production for civilian needs (which was already being achieved) but rather to rationalize future production to save part-time working and to release labor and factory space in areas where they would be useful to the war production program at large.

Branded merchandise

Because of the effort, at that stage, to maintain the voluntary character of concentration, the plans adopted varied considerably. In hosiery, for example, small firms continued largely to have their own products made for them by nucleus firms. In cotton, concentration was achieved largely through the Cotton Board, a semi-governmental agency. In cutlery, the government had to impose its own plan as the industry did not lend itself to voluntary concentration. The problem of branded articles was met in various ways. Where they could not be maintained, they were sometimes replaced by a wartime substitute brand, representing a joint production of different firms. Where concentration plans covered the industry as a whole, compensation funds were founded for the care and maintenance of closed factories. In the cotton industry, nucleus firms paid a levy based on spindles left in operation. In the carpet industry the levy was based on the amount of carpets produced.

Typical of the new attitude to concentration was the plan put forward by the Board of Trade in June 1942 for the re-organization of the soft drinks industry. Under this plan production for the whole industry is to be given over to a small number of firms. All brands are to disappear for the duration of the war. The output of the nucleus firms is to be carefully planned; carbonated drinks are to be decreased in volume, but essences and syrups, easier to transport, are to be increased. Deliveries are to be organized so that each factory will deliver only in a prescribed area.

Even more sweeping is the plan for the clothing industry. Out of about 25,000 firms engaged in making up clothing, about 2,000 (mainly the large mass producing firms) have been "designated" to produce all the "utility" clothing. With the cloth manufacturers allowed to produce very little but "utility" cloth and with the consumer spending his coupons almost entirely on "utility" clothes, the pattern for this industry is thus complete.

Paper box industry

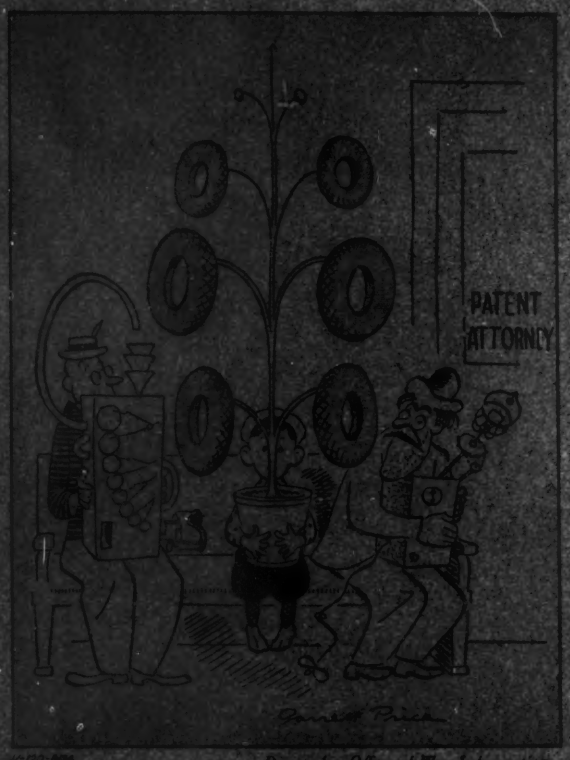
Typical also of latest developments are efforts made to extend or simplify existing concentration plans. Some industries, for example, hosiery, have been re-concentrated. The paper box and carton industry which could not achieve concentration is now being surveyed for compulsory concentration. The operation of the brick industry has been considered by a special government committee and a plan formulated similar to the plan for the soft drinks industry.

Independently of the Board of Trade, the Ministry of Food has been active in applying concentration wherever possible to the production of food. Since 1940, margarine and cooking fats have been manufactured by one combine representing all manufacturers and producing a standard unbranded article. The slaughtering of cattle and the dressing of meat have been restricted to 800 slaughter houses. Before the war about 16,000 butchers slaughtered their own cattle. Concentration plans have been prepared for bacon curing, butter packing, cheese processing, milk canning, glucose manufacture, provender milling and egg packing.

Striking progress has been made in the concentration or rationalization of food distribution. Wholesale buyers of margarine, fats and flour have to take it from the nearest factory or mill. After September 30, 1942, retail sales of milk are to be rationalized. In every urban center, deliveries of milk are to be re-organized to prevent any overlapping. Many dairymen will be forced to withdraw for the duration.

A form of concentration has also been introduced into the packaging of all types of goods. Apart from the controls which have increasingly restricted the use of paper, cartons and tin in packaging, the latest packaging order drastically reduces the number of sizes in which commodities may be packaged, sometimes allowing only a single size. Manufacturers in no less than 100 trades had already reduced the numbers of sizes available for their packs and in many cases have voluntarily adopted standard containers.

The most difficult problem, as yet unsolved, is the possible concentration of retail trade. With the shortage of supplies and labor, traders have been badly hit. A sample survey in seven towns showed that about (*Continued on page 116*)



Drawn for Office of War Information

IT CAN BE DONE · · · WE DID IT · · · IT LOOKS LIKE ALUMINUM FOIL

Examine carefully the perfect metallic finish of our material. It can replace your aluminum foil or composition foil or tin foil wrapper and carton no longer available.

It is non toxic
It can be made waterproof
It can be made heat sealing
It can be made grease resisting
It is available in various weights, finishes and colors

You doubt it? . . . . well, write to us for samples and information. We will be glad to tell you all about it and solve your packaging problems.

KELLER-DORIAN CORPORATION 516 W. 34th St., N.Y.C.

HOLDER OF THE COVETED TREASURY FLAG

DISTRIBUTORS

CHICAGO PAPER COMPANY
801 South Wells Street, Chicago, Ill.

DWIGHT BROTHERS PAPER COMPANY
626 South Clark Street, Chicago, Ill.
325 North Milwaukee Street, Milwaukee, Wis.

THE JOHN LESLIE PAPER COMPANY
301 South Fifth Street, Minneapolis, Minn.
Park Square, St. Paul, Minn.

MATTHIAS PAPER CORPORATION
165 West Berks Street, Philadelphia, Pa.

MILLCRAFT PAPER COMPANY
1927 East 19th Street, Cleveland, Ohio
1933 Spielbusch Avenue, Toledo, Ohio
237 East Mill Street, Akron, Ohio

NORTHWEST PAPER SALES COMPANY
1205 Western Avenue, Seattle, Wash.
139 S. E. Taylor Street, Portland, Ore.

PAPER SALES LIMITED
11 King Street West, Toronto, Canada
1559 Sun Life Building, Montreal, Canada

POLLOCK PAPER & BOX COMPANY
Dallas, Texas

PRATT PAPER COMPANY
176 Federal Street, Boston, Mass.

A. E. SKERRITT
1356 - 22nd Avenue, San Francisco, Calif.

A. W. ZUKOSKI
455 Paul Brown Building, St. Louis, Mo.

KELLER-DORIAN CORPORATION 516 W. 34th St., N.Y.C.

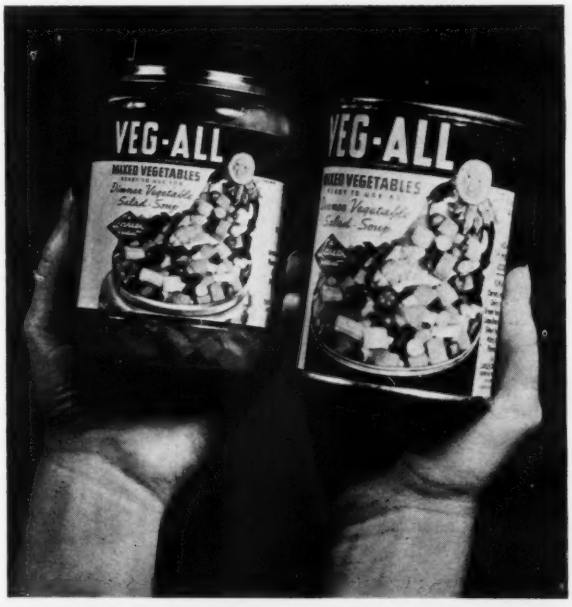
Can label identity retained on glass

To continue "Veg-All," a vegetable mix for salads or soup, since the government restriction order on tin cans for such products, The Larsen Co. has put this product in glass containers.

The problem of conversion was not difficult in this case, since the company already had a glass packaging line. However, in making the change, the company wanted to retain as much of the appearance of the tin package as they could. The glass label was designed to appear as much as possible like a tin label, therefore, so not to risk losing the consumer acceptance which has been built up through the use of a series of color pictorial recipe labels. Thus, the new labels on glass, as may be seen by the photos, are as nearly like those on the cans as the company could make them.

Larsen had the future in mind, of course, in this procedure in the event that they may wish to return to tin after the war. They recognized that the war may be a period of danger for them if the consumer fails to recognize the new glass package and should not associate it with the old package. Vice versa, they reasoned the same would be true if the change should ever be made back to tin again.

Their new label, then, is wide in (*Continued on page 114*)



Top. Front of label, showing brand and product identification, is the same on all the glass containers. Center. New glass packages of Larsen "Veg-All" showing series of ten pictorial recipe labels. Bottom. Cans, now replaced with glass, illustrate how the characteristics of the former labels have been carried out for the new glass series.

(*Page 69*)

Use of the flag in packaging

Many times lately the question has arisen with regard to the propriety of the use of the flag and other national insignia on packages and in display. To provide a background for sound judgment on such matters, the National Better Business Bureau has published through its division of research, a bulletin revised in August, 1942, called "Facts About the Use of the Flag in Advertising." This bulletin is available for a small fee from the bureau, 405 Lexington Avenue, New York City.

Included in it, is a review of all important legislation, resolutions, precedent established by court rulings, etc., pertaining to this subject, as well as references to much published data on the question.

From this data, the packager or display man can draw his own conclusions as to the use of the flag on merchandise, whether as printing on a carton or label or on a display piece.

Summary of data

According to information available to the Bureau, a summary of the situation was published as follows:

1. All States and the District of Columbia have statutes prohibiting the use in advertising of the United States flag and that of their own States. A joint resolution of the Senate and House on the use of the flag declares that the flag never should be used in advertising in any manner whatsoever.
2. The United States flag, shield, emblem, etc., or simulations thereof, and the state flags, may not be used as a trade mark or associated with a trade mark.
3. No advertising may be placed upon, attached to, or connected with the flag, shield or emblem of the United States or of the various states, or upon simulations of such flags and emblems.
4. There is no postal regulation prohibiting the reproduction of the flag.
5. Federal Trade Commission proceedings on the use of the United States flag as an unfair trade practice have thus far been brought against only one concern which voluntarily agreed to cease using any pictorial representations of the flag and the letters "U. S." to imply that its products are made under government contract or according to government specifications, when such is not the fact.
6. Most of the states specifically exempt the use of the flag in newspapers, books, pamphlets, circulars, ornamental pictures, stationery, etc., from the provisions of their acts provided such use of the flag is disconnected from any advertisement and provided further that the reproduction of the flag bears no words or design. Some states do not expressly exempt publications, ornaments, stationery, etc., from the operation of their flag laws.
7. With the exceptions previously noted, most states prohibit the use of the flag on articles of merchandise.
8. According to the views expressed by the attorney generals of some states, an illustration of the flag may not be used when advertising to sell the flag itself, or flag stickers; in other states such use of the flag in advertising may be considered permissible by the authorities.
9. Even in states which permit the reproduction of the flag on ornaments such as jewelled flags, it may be considered illegal to illustrate an advertisement to sell such pins with a reproduction of the article offered.
10. The United States flag may be displayed by vendors provided it is not associated with an advertisement and is not used primarily to call attention to the sale of something, or for any *business* motive but is used solely for *patriotic* purposes.
11. The courts may consider the mere display for sale of an article bearing a reproduction of the flag, either as a part of the article itself or as an illustration on a box top to be an advertisement.
12. Common sense and patriotism dictate the proper use of the flag rather than any hard and fast rules. In weighing these factors the courts may consider not only the advertiser's use of the flag, but the ultimate use to which any article bearing a reproduction of the flag may be put by purchasers.

What constitutes advertising

An interesting point as to what constitutes an advertisement came up years ago. At that time *Printers' Ink* received an inquiry asking whether the use on candy box tops of various pictures of Revolutionary War incidents in which the flag invariably appeared in the background was permissible. The inquirer knew that such would be forbidden in advertising, but wanted to know whether a candy box top was considered an advertisement. *Printers' Ink* answered:

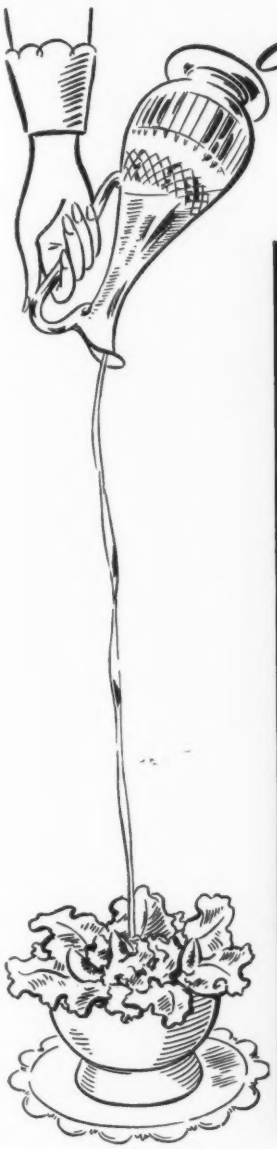
"Aside from the question of good taste involved, the use of the United States flag, or any part of it, for the purpose of calling attention to any article of merchandise is prohibited by very strict laws in at least 43 states. Pictures like those described, even though they include the flag only as part of the design, might therefore prove to be highly dangerous.

"For verification purposes, copies of the statute may perhaps be obtained from the State Department of Pennsylvania or other states. So long as a candy box top is used to attract customers, the courts are liable to consider it an advertisement. The flag had better be eliminated in all such cases."

On January 7, 1942 Deputy General James Ward Rector of the State of Wisconsin gave the following to a District Attorney who had made inquiry:

"It is our further opinion that a flag used on a calendar or pencil in connection with the name of a business and a statement of the activities carried on by the business is not 'disconnected with any advertisement.' The giving away of a calendar or a pencil is obviously advertising and the use of flags upon such advertising media is clearly connected with an advertisement."

Assistant District Attorney Edward S. Joseph of District Attorney Thomas E. Dewey's office in May 1942 in the Court of Appeals of the State of New York, successfully prosecuted a case against use of the flag in violation of the statute. In regard to the case, he informed the Better Business Bureau, "(1) No matter how patriotic the motive, advertisers cannot attach, append, affix or annex in any manner an advertisement to the flag of the United States and (2) advertisers cannot justify the use of the flag in connection with an advertisement by claiming that the flag is used separately as a patriotic display; (3) one cannot use the flag as an attraction to enrich his pocket." Other cases are also cited in the bulletin.



We've dressed up this salad dressing!

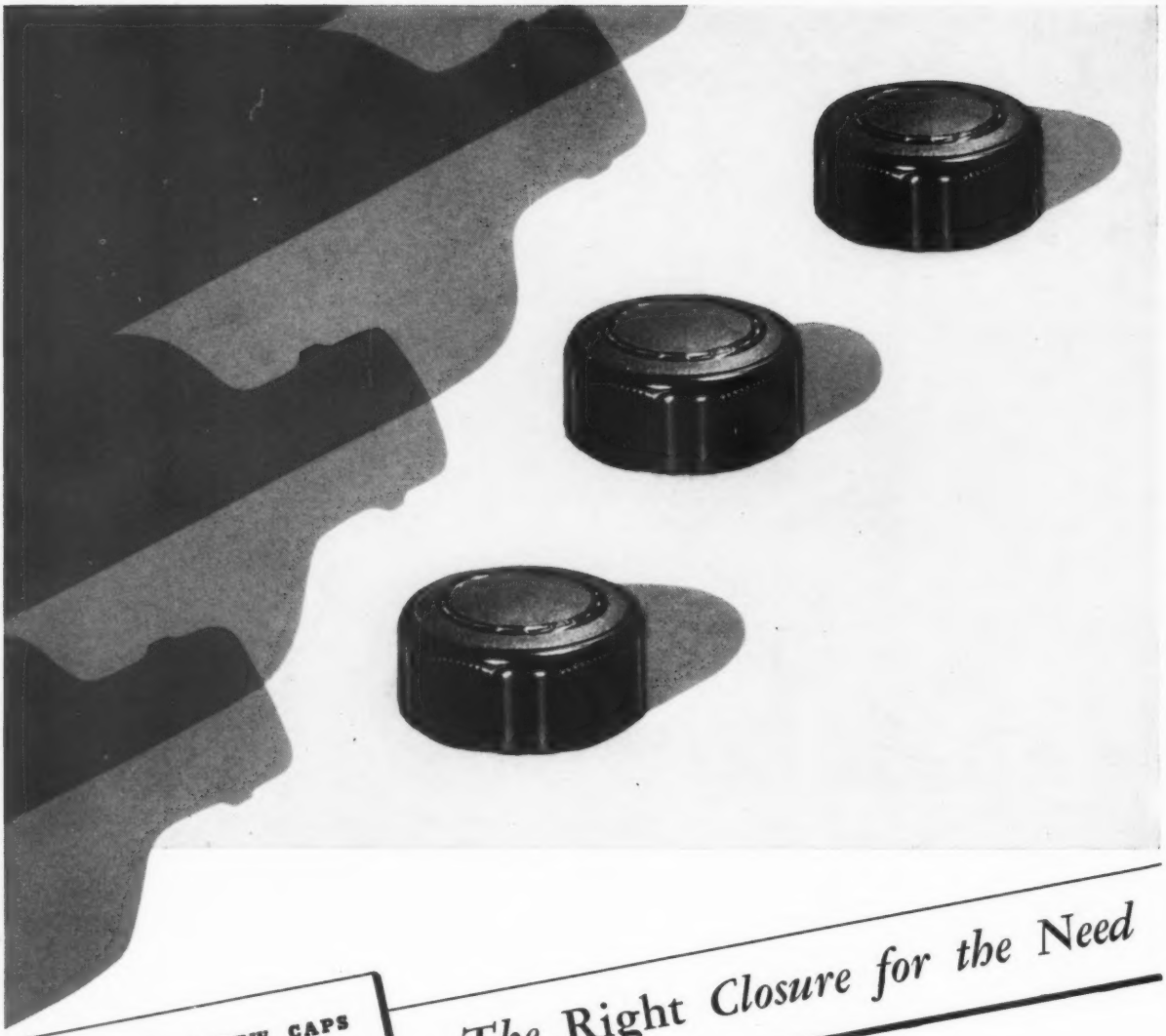
MORE and more attention is being directed to the need for an adequate supply of vitamins in America's war-time diet... and the salad bowl figures prominently in that picture.

The Venice Importing Company packs a Soya bean Salad Oil under its "Fiorella" Brand which is coming into ever greater demand. Its sales appeal has been strengthened by dressing it up in a Crown container...that also protects the purity and flavor of the contents until they reach the consumer's kitchen.

If you are marketing a food product that requires a metal container... the Crown organization is at your service for consultation and to make recommendations...with due deference to the war-time needs of the Nation.

CROWN CAN

★ CROWN CAN COMPANY, PHILADELPHIA, PA., *Division of Crown Cork and Seal Company* • Baltimore • New York • St. Louis • Houston • Madison • Orlando • Fort Wayne • Nebraska City ★



MUNDET SCREW CAPS are made to give maximum sealing protection. Various kinds of liner discs are available to meet special needs. These attractive, modern closures are quickly applied or removed from the bottle. Standard diameters and stock designs.

The Right Closure for the Need

If you contemplate a change in sealing or packaging methods, we suggest that you consider our ability to serve you. *Our background* is 75 years experience in making many kinds of closures for many kinds of products. *Our specialty* is to insure the quality of your products with the most practical closures available. *Our desire* is to help you . . . now. Tell us your need. Mundet Cork Corporation, Closure Division, 65 S. Eleventh Street, Brooklyn, New York.

MUNDET CLOSURE SERVICE

MOLDED CORKS • MOLDED SCREW CAPS • EMBOSSED WOOD-TOP CORKS • CROWNS • PLAIN CORKS

Timely window and counter displays, and pennants tie-in the name Agrico with victory gardens.

The merchandising show must go on

by Frank H. Meeks

It has been aptly said that come what may, the merchandising show must go on. This statement may appear a mere platitude, but that makes it none the less true. American merchandising is not something that suddenly sprang up, only to disappear with the first challenge to its existence. Just talk to three or four manufacturers about current merchandising and one, at least, will ask the question, "Why should I use point-of-purchase advertising in times like these?"

The ready answer to that question is: If he has lost faith and hope, he shouldn't. But, if he believes that the present world-wide state of chaos is only a temporary condition, if he can still keep his hope alive and not be panicked by the myriad complexities of the present situation, he should hold on to fundamentals and maintain some kind of public relations program. When the times are bad and the future uncertain, the only hope an individual or an organization has is *hope*. Without it, the farmer would plant no seeds and the business man would make no plans. They would say, "Let the country go to the dogs," and it most assuredly would. Right now, we as individuals or as business men can do one of two things: We can either commit what

(*Page 73*)

use AGRICO Grow LUSCIOUS VEGETABLES
use AGRICO FOR LAWNS
use GARDEN AGRICO have Beautiful Flowers!
Feed TREES and SHRUBS with AGRICO

1

1. Despite product restrictions, Kayser keeps alive its name with posters. 2. This unit takes the place of a former one which used critical materials. 3. Pond's met the clerk shortage with this self-service floor stand.

amounts to suicide by allowing the present situation to get the better of us and do nothing about it; or we can retain our faith in certain unchanging principles of good business and make every effort not only to survive as business entities but also to be ready to take our places in the post-war world.

Most people are familiar with the fundamental merchandising rule which stresses the importance of being known. It is time that someone drive home again the lesson of this rule—lessons learned the hard way by those manufacturers who curtailed their merchandising efforts during World War I. These men obviously overlooked the fact that the importance of being known, when neglected, could instantly reverse itself and quickly teach them the lesson of the stern consequences of being forgotten by the consumer public. Everyone should bear in mind that a trade name and the good will of consumers is often more important to a business than machinery—particularly if the public has forgotten about the firm and its product. It is important to remember that tangible things in normal times are often easier to obtain than the intangible ones and that it takes untiring effort mixing with people, to build good will. There is no substitute for personality or for character. This fact holds true for a business organization as well as for the individual.

There has been so much said and written about why advertisers cannot afford to stop advertising and about what happens when appropriations are cut to the bone, that to emphasize the necessity now of maintaining trade and brand identity certainly appears to be carrying the proverbial coals to Newcastle. Most of you who read this article are aware of the many reasons why a manufacturer should not bury himself because of intermittent blackouts. Other than those generally accepted reasons, there is a purely selfish one—this certainly is not the time for any enterprise to give business as a whole a black eye. And one business which fails to tackle its problems courageously or goes into hibernation until the war is over, makes it just that much harder for business in general to maintain a healthy condition or outlook. There is an old saying to the effect that many

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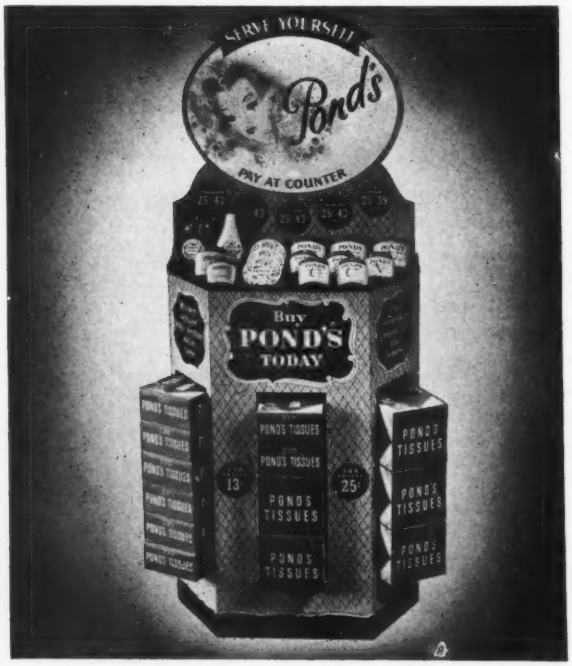
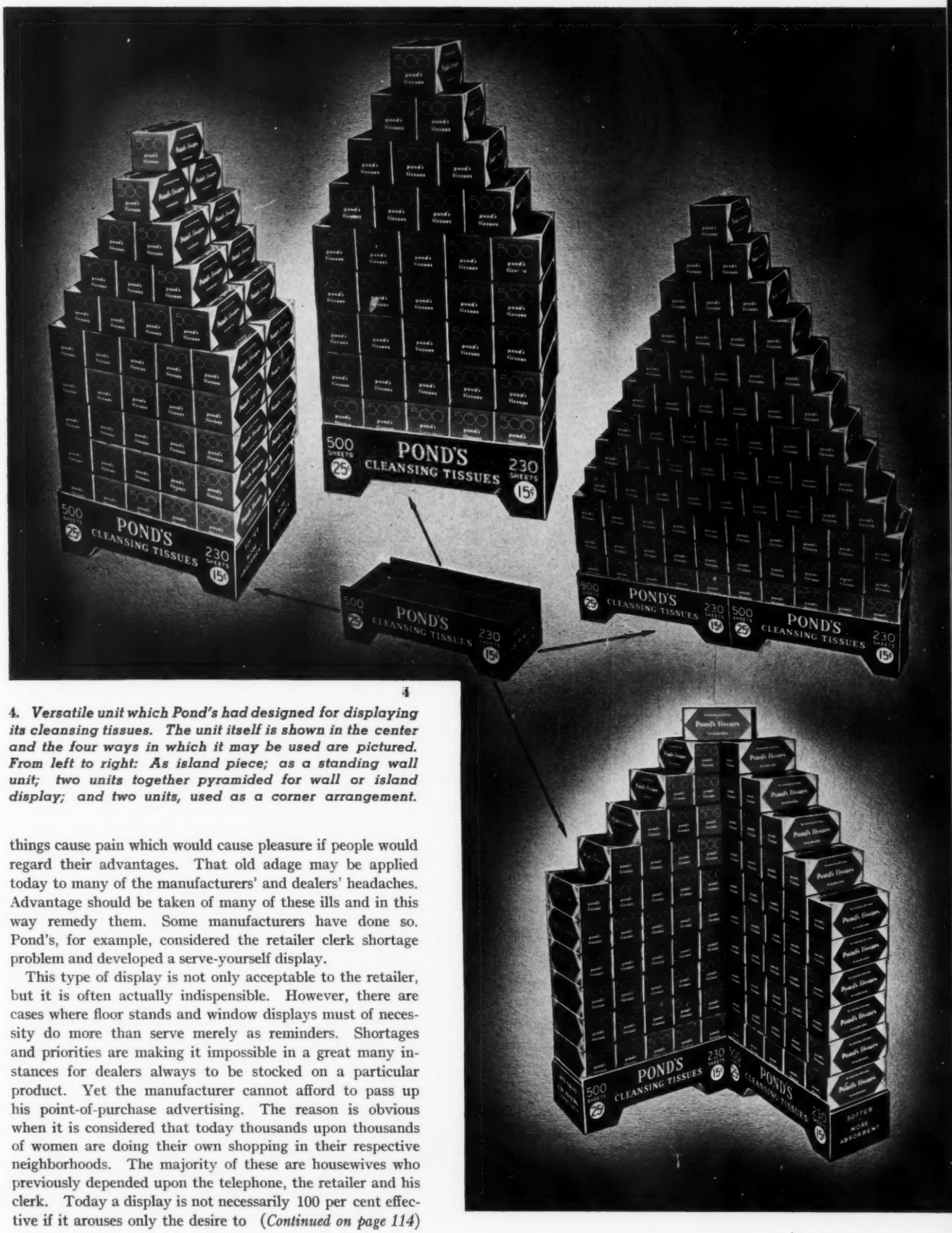




4

4. Versatile unit which Pond's had designed for displaying its cleansing tissues. The unit itself is shown in the center and the four ways in which it may be used are pictured. From left to right: As island piece; as a standing wall unit; two units together pyramided for wall or island display; and two units, used as a corner arrangement.

things cause pain which would cause pleasure if people would regard their advantages. That old adage may be applied today to many of the manufacturers' and dealers' headaches. Advantage should be taken of many of these ills and in this way remedy them. Some manufacturers have done so. Pond's, for example, considered the retailer clerk shortage problem and developed a serve-yourself display.

This type of display is not only acceptable to the retailer, but it is often actually indispensible. However, there are cases where floor stands and window displays must of necessity do more than serve merely as reminders. Shortages and priorities are making it impossible in a great many instances for dealers always to be stocked on a particular product. Yet the manufacturer cannot afford to pass up his point-of-purchase advertising. The reason is obvious when it is considered that today thousands upon thousands of women are doing their own shopping in their respective neighborhoods. The majority of these are housewives who previously depended upon the telephone, the retailer and his clerk. Today a display is not necessarily 100 per cent effective if it arouses only the desire to (*Continued on page 114*)

Display Gallery

1

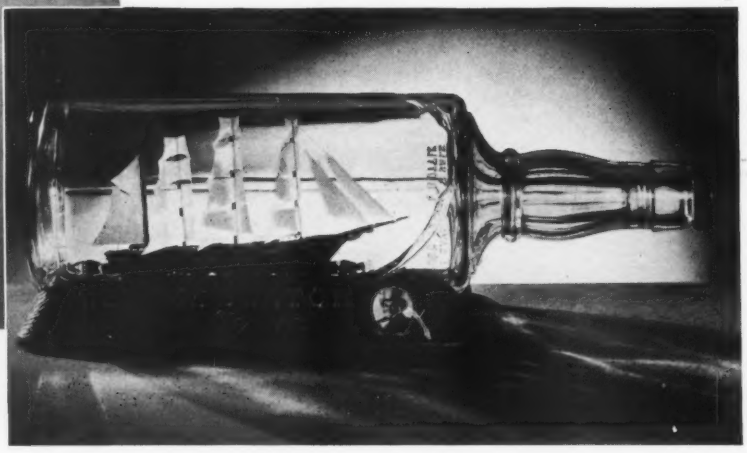
1 A timely eye-catcher for Ballantine's beer and ale is this lithographed unit showing young shoppers saving gas and oil by taking home their packages on a tandem bicycle. The bicycle basket is constructed so that it will actually hold bottles of beer. The pretty girl is on another plane of the display and her friend is seen behind her, thus giving the effect of three-dimension. Display made by Einson-Freeman Co., Inc.

2 Salt tablets have been put up before in bottles and sold by druggists upon request. But the Morton Salt Co. conducted some field research and market tests which indicated to them that the time was right to merchandise salt tablets to the public in a different way. The tablets were put up in trim, sanitary plastic tubes. Twelve tubes were then packed in a colorful, compact counter display carton. Only a few inches of counter space is occupied by the carton and this fact encourages the druggist to use the display. It is easel backed for adequate support. A dragon-like creature symbolizes "heat-fag" and three drawings of men and women illustrate the time when salt needs to be replenished in the body. The price has an attention spot at the base of the display, with brand highlighted on a center band. Dispenser by Badger Merchandising Displays, Inc.

2

3 Old Mr. Boston ship-in-a-bottle display for back-bars presents a singular approach for this type of display that gets away from the usual patterns. It suggests a theme that is directly associated with the traditions of New England and in this way reflects the company's trade mark, "Old Mr. Boston." The four-masted model of a bark is assembled by hand in the large bottle. The bark rests in the bottle on a sea made of white clay, which is dyed in a blend of green and blue oil colors and molded in white capped waves to give the effect of the sea. The bottle itself has three flat panels forming the back and a half-circle forming the front. It rests on one of the flat panels on a brown base imprinted with the company's trade mark and name. Although designed for backbars, the display is equally effective when used in windows, on counters or ledges of the restaurant or bar. It also has the value of never going out of date. Bottle and closure, Owens-Illinois Glass Co. Ship and installation, Federal Displays. Base made by Chaspec Trading Co., Inc.

3



4 In line with its general informative promotion, Lucky Strike is using this reproduction of an original painting by Peter Hurd for window displays. This particular painting in the series illustrates the grading of the tobacco leaf after it has been cured. The display has a step on which packages of cigarettes may be shown and at the base is a lithographed replica of a carton of Lucky Strikes against the background of a huge tobacco leaf, thus emphasizing the company's advertising theme of quality tobacco. Display by The U. S. Printing & Lithograph Co.

4

5 An 11-year-old boy developed this new demonstration tray for The Borden Co. He got the idea for it one evening when his mother, Peggy Kiley of Radio Station WEEI, Boston, mentioned at the dinner table that she wished she had a more convenient tray for demonstrating Borden's cocktail spreads in stores. It is hard to keep a demonstration table from getting cluttered up, to have the kind of cheese immediately at hand that the shopper would like to taste and to have folders and leaflets ready to give visitors to the table. Kenneth, Mrs. Kiley's son, had had instruction in wood work at school and camp and when he heard his mother's remark, he hit on the idea of building a revolving tray with eight divisions, one for each variety of Borden's spreads. He built it from wood. It works in the same way as the old-fashioned lazy-daisy. Jars of cheese spreads fit into wells and there is space for a serving on each of the petals of the "daisy" as well as space between them for leaflets and folders. A wood ring handle makes for easy carrying. The tray was so successful that Borden's has ordered a number of them from the young designer for use in store demonstrations.

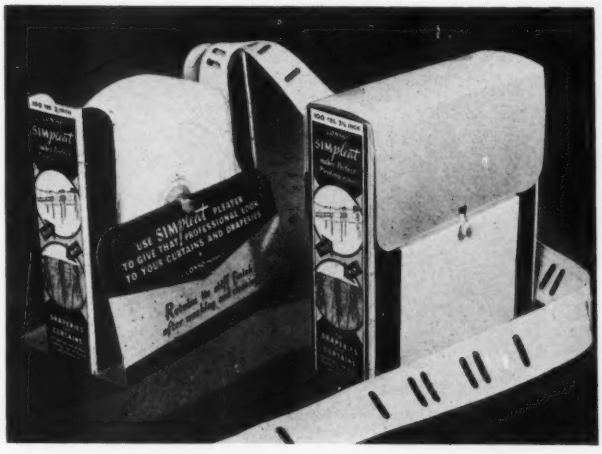
5

6 Counter display for Lenthéric's Soft-Focus products is made of wood and glass. The wood is painted a delicate pink, except on the back and top panels, which are in a light blue. The front section of quarter-inch plate glass is etched with product and brand identification and the outline of a girl with a mirror. The name, "Lenthéric," is also screened in gold on the front of the base of the display. Each unit comes equipped with wire, a tubular frosted lamp and a standard reflector for projecting the light downward on the products displayed. Unit made by Copeland Displays, Inc.

6

7 Consolidated Trimming Corp. presents its new time-saver product for the homemaker in this paper counter dispenser. The product, Simpleat, is sold by the yard and is wound in a roll on a wooden rod. The dispenser is constructed so that the ends of the rod fit into brackets and as the material is measured off by the clerk, the roll unwinds easily. Full instructions on the use of the product are printed on the dispenser. It also affords complete visibility with adequate protection for the product. Dispenser made by Robert Gair Co., Inc.

7



Poster telling about repair service and four patriotic cards help keep trade name alive

Displays in a frozen market

Here is a company that knew exactly what to do when it could no longer supply civilians with its product. "Now, more than ever before," wrote the Zenith Radio Corp. to all its dealers throughout the United States, "we must stand together to protect our name association. If we are to survive the shortages of merchandise, material and buying power imposed upon us by war, then we must do so by name prestige. . . . the well advertised and widely known brand name of Zenith will not fade from the public mind. This is our promise to you. The Zenith could be kept before the public through national advertising alone, but if we should resort to such national effort only, it is you and the other dealers who will suffer the consequences of neglect. We, therefore, have selected you and thousands of other Zenith radio dealers to be the medium for the first great institutional campaign. Read the attached folder carefully."

With the letter, the corporation sent a package containing a folder, describing the "victory theme" promotion program, and an array of material for the dealer's store, window and newspaper advertising. The folder explained that Zenith's victory drive represented a new and entirely different approach to promotion and advertising for both the company and the dealer, but that it was a program in which the dealer as well as the manufacturer would share responsibility and public good will.

Zenith was prompt in helping its dealers who were searching for a patriotic theme that would really aid America's war program. Dealers were and are given good, timely, patriotic window and store displays which, at the same time, tie-in directly with what they have to sell. The Zenith plan not only assists the dealer in keeping America conscious of the job to be done, but it also (*Continued on page 116*)

The streamer below ties-in victory drive promotion with manufacturer and dealer.

ENTER

The First Wartime Package Competition

- The 12th Annual All-America will be the the first held under war conditions and the first to mirror the impact of war on the packaging industries of America.

- As such, it will attract even more attention than the peacetime All-Americas. It will bring even more publicity and prestige to its winners.

- Judging will be based on wartime standards, of course. Packages will be judged on the basis of their use of substitute materials, their conversion to war needs, their use of stock containers, their elimination of waste materials, their use of functional design, their contribution to morale.

- There will be a place for every package produced in the first year of World War II. It is the chance of all packagers—your chance—to tell America what packagers are doing to help "keep 'em rolling."

ENTER NOW! NO COST OR OBLIGATION!

Send for as many Entry Blanks as you need

12th *All-America Package Competition*

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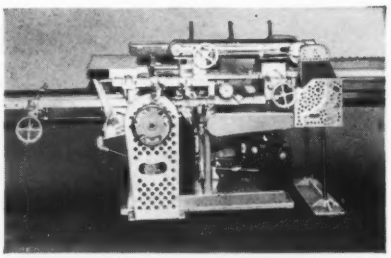

Model FA—One of the most widely used wrapping machines in the package goods field.

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At the shelling stations the vines are fed into shelling machines by conveyors. Rapidly revolving paddles separate the peas from the pods.

Farm-fresh foods in quick-freeze packs

In Bridgeton, N. J., is one of the many Birds Eye quick-frosted food plants. At this plant asparagus, green beans, peas, lima beans, spinach, broccoli and cauliflower in season are literally picked, processed and packaged within a few hours. The vegetables packed at Bridgeton, however, represent only a few of the over 60 kinds of fruits, vegetables, meats, poultry and seafoods in the Birds Eye line. These products come from all over the country, but not all of them are packed in the same Birds Eye plant. Plants are set up wherever the raw materials are best, so that the foods may be quick-frozen immediately.

Bridgeton is in the heart of the East's great vegetable growing region. It is from this section of the East that a large percentage of peas, lima beans, waxed and heavy green beans and asparagus used for commercial packing are grown. These facts assured Birds Eye in establishing its quick-frozen operation in Bridgeton that farm-fresh vegetables in season always would be within a stone's throw from the plant and that they could be quick-frozen immediately after harvest.

Because the packing period in southern New Jersey is unusually long, the Bridgeton plant can operate continuously from May to almost the first of December. Foods are quick-frozen and packed in this order in the average, normal, long-growing season: Asparagus from April to July, peas from the first of June to the first of July, string beans from the last of June to the first of October, corn from the last of June to the first of August, lima beans from the first of August to the first of October, broccoli from the first of September to the middle of November, cauliflower from the middle of September to the first of November and spinach from the last of September to the middle of November.

The Bridgeton plant, as well as all the other Birds Eye plants, operates under rigid rules of procedure to insure the same high quality of product. It has its own staff of experts who watch and control production carefully and its own laboratory which continually tests color, texture, appearance and flavor of every product packed. In order to be certain that the packaged product will be of the highest possible quality, Birds Eye makes sure that the foods are of the best quality to begin with. Specially chosen seeds are used in planting the vegetables and during the growing period scientific care is given. Some are even dusted by airplane against insect infestation to insure that when harvest time comes, the vegetables will be of sound quality. Features of the raw products which contribute to the sought-for quality in the packaged quick-frozen foods are tenderness and sweetness in

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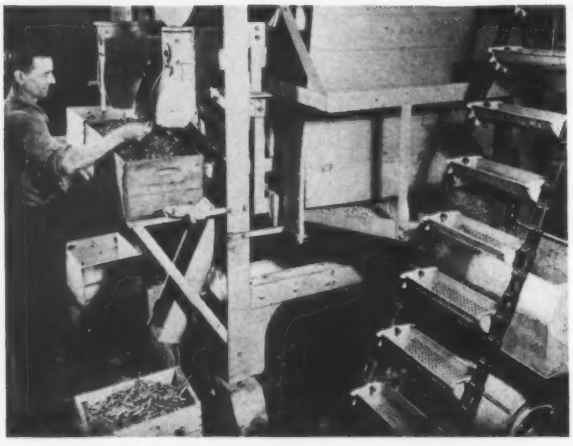

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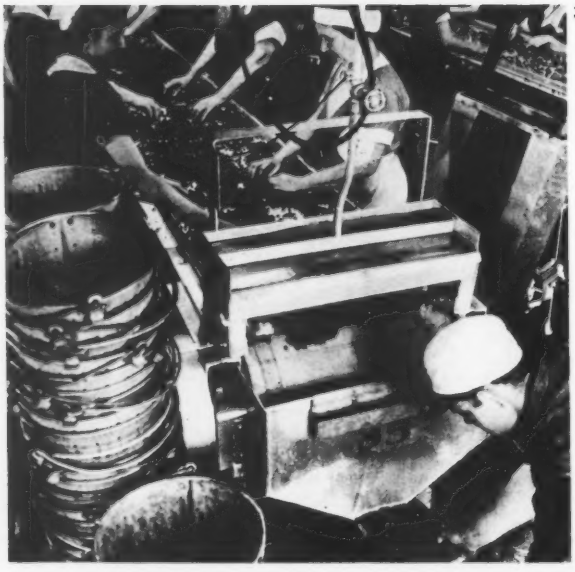

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peas; stringlessness in green beans; tender, thick leaves in spinach; and solid, firm stalks in broccoli.

When the different crops are perfectly ripe, harvesting begins. From the time the vegetables leave the field until they arrive at the Bridgeton packing plant, about half an hour elapses. This harvesting at proper maturity and prompt handling from field to freezer are of first importance in the production of a quality, quick-frozen food. There must be no delays at any time or vegetables will quickly lose their quality. As crops are harvested, they are loaded in the field on trucks which take them to the nearby plant. Upon reaching the unloading platform of the plant, vegetables are checked for quality and those accepted go into the production line, ready for cleaning, washing, more grading and rewashing.

Peas, however, before going into the production line must be taken to shelling stations where the vines are fed into shelling machines which separate the peas from the pods. The peas are carried by conveyor belt to small wooden boxes. The filled boxes are then taken to the plant.

Processing operations for the preservation of vegetables by freezing closely parallels canning operations up to the time when the prepared food goes into the freezer instead of the cooker. The major difference in handling the products up to this point is the necessity for meticulous care in retaining the food's freshness, that is, the color, texture, flavor and vitamin content, and in keeping down the bacterial count. In quick-freezing operations, any loss of the characteristics of freshness during the process of preparation or even during the freezing can neither be regained nor concealed. The success of the method used by Birds Eye is measured by the moderateness of its destructive effects—its capacity for actu-

1. When the shelled peas are brought to the packing plant they are immediately tested for quality and taste. Those that are accepted are fed into the fast dry-cleaning operation. 2. Shows the first cleaning operation after the peas have come from the farms. Bits of pods, vines and leaves or other foreign material are separated. Then the farm-fresh peas are carried by conveyor buckets to the first cleaning operation. 3. After being thoroughly washed and graded, peas are carefully inspected before they go along to the packaging machines. 4. This picture shows the peas coming from washing machines after they have passed through various steps of cleaning and grading. 5. Spinach being packed in cellophane-lined cartons.

5

ally keeping the vegetables garden-fresh during the process.

First operation in the production line is that of cleansing. All vegetables are washed thoroughly in flowing streams of water. Cold water sprays have been freely installed so that every food contacting surface receives continuous spraying. This prevents contamination of the vegetables as they move along the line and is part of the Birds Eye maintenance of extreme cleanliness from field to the time the package of beans or peas or spinach or any other vegetable is purchased by the housewife. The production line is kept as completely simple, sanitary and rapid as is possible so that the foods are literally hustled between harvest field and cold storage room. They have at no stage touched anything dirty or run the risk of acquiring any taint.

From this first cleansing, vegetables pass on by conveyor belts to graders. The method of grading depends upon the product. The observation method of grading uses a moving inspection belt which passes the product slowly before graders who remove particles which do not meet the set standards. Lima beans are graded by this method in order to separate the green and white limas for separate packing. Asparagus is selected in this way for size and length of green stalk.

Grading for size into two or more groups is done automatically by the use of perforated, vibrating belts or tables. Shelled peas, however, a product having relatively small differences in density, are separated by immersion in water or a swirling bath of brine. When immersed in a brine of suitable density, they separate according to their maturity, the denser, overmature peas settle to the bottom, while the lighter, tender peas rise to the top.

Most of the vegetables are (*Continued on page 108*)

6. After packages are filled by automatic filling machine, they are individually weighed for correct weight. Picture shows girl adding peas by hand. From here the packages go along conveyor belt where they are closed and then pass along to the automatic wrapping machine. 7. Filled packages being placed in the quick freezing machine. 8. Testing laboratories are maintained in all Birds Eye plants. The product being packed is tested before, during and after the packing operations. 9. Peas being stored in sub-zero temperature room at plant in Bridgeton, N. J. Even sub-zero temperature is maintained at all times. 10. Modern refrigerator trucks transport the foods from point of production to nearby warehouses.

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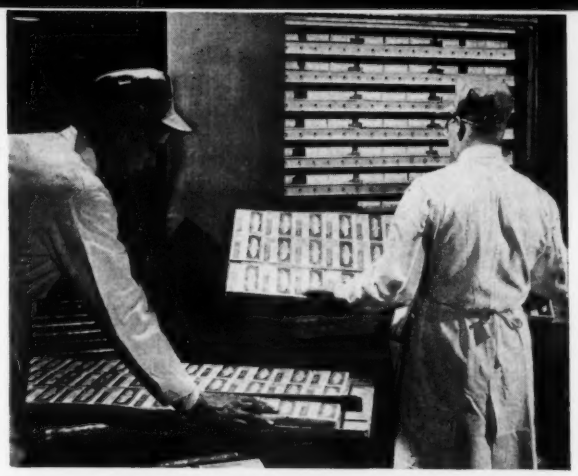

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"Time and again these days, I see alert, carefully-controlled machine maintenance paying off in uninterrupted, faster production and longer life," says "Speed" Production. "Clean, properly lubricated, well-kept-up machinery is efficient machinery. Operators take pride in it, and your production lines hum. Needless stops for repairs and adjustments are eliminated. Yes sir, the efficiency and life of your machinery rest right in your hands — and here are a few common-sense pointers on how to handle packaging machines:

1. "If possible, assign one person to be responsible for the proper cleaning and lubrication of all your packaging machinery.

2. "Appoint one person to be responsible for the supplies of lubricants; particularly, special vacuum pump oils, heavy grease for gears, lighter grease for transmissions. — When stocks run out there is always a dangerous tendency to use 'any old grease or oil' for the time being, and that should never be done.

3. "Set designated times, at the proper intervals, to service the different parts of the various machines. For a *thorough* lubrication job, the machine should be shut down.

4. "On machines handling glue, don't let glue cake up to any extent. You can chip most of it off with chisel and mallet, then soak off what remains with water and a rag.

5. "In a room where a dusty material is being used, machines should be cleaned with an air hose periodically.

6. "Operators should be trained to report immediately any squeaks or noises that are out of the ordinary. Your machine maintenance program depends on the cooperation of the operators as well as on the person you assign to be responsible for machine lubrication.

7. "Motors should be lubricated only by someone who thoroughly understands them — preferably by the plant electrician.

8. "Your machine builder or lubricant supplier will be glad to give you complete information on specified oils and greases to prolong the life and boost the efficiency of your machines."

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PACKAGING & BOTTLING EQUIPMENT

Speedway for cartridge cartoning

*by Carl A. Claus**

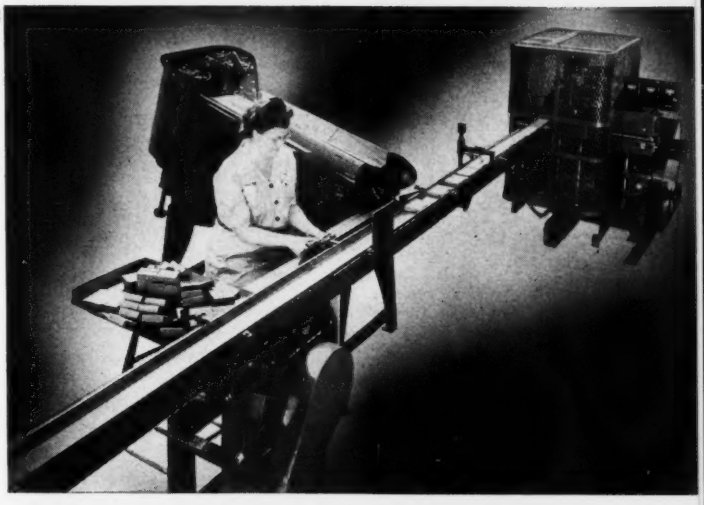
Literally by the million, Uncle Sam is providing small arms and machine gun ammunition destined for use by the Army, Navy and Air Corps wherever they find an enemy or a practice target. These bullets, more properly called cartridges, must be packed for convenience in handling and shipping. They must be packed to withstand subjection to every possible climatic change of temperature and humidity. And they must be packed quickly, for they are produced in a volume almost, if not actually, greater than any other product ever merchandised.

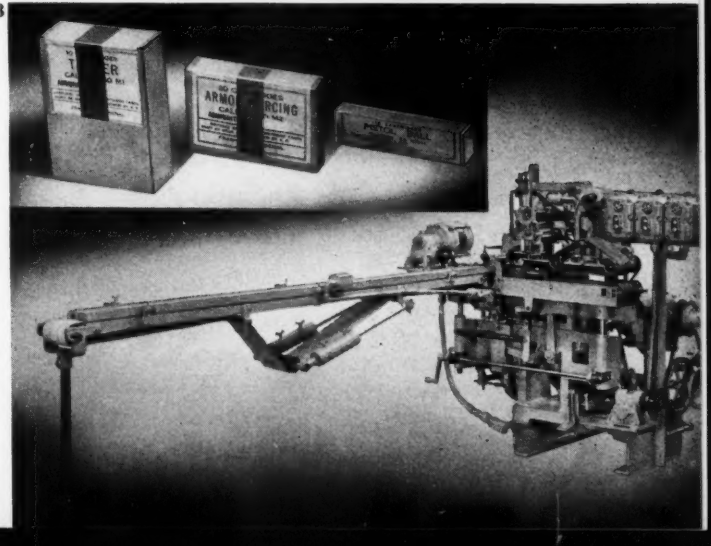
The military experts who decide such matters recommend boxboard cartons, fitted with partitions similar to those used in egg cartons and made in sizes to carry 10 or 20 cartridges, depending upon the calibre. Since speed is absolutely essential in packing the stupendous quantities of cartridges needed to supply the armed forces, mechanical means for every packaging operation, in so far as possible, are being or have been developed. Machinery that can speed up any one operation is of tremendous importance as a time saver for the whole packaging line.

In a number of plants the operation of labeling and sealing packages of small arms ammunition has been speeded up by using a conveyor-feed, fully automatic labeling machine. This machine closes the scored top-flap of the cartridge carton, applies the standard label so that it covers the face of the carton, seals the top-flap into position and anchors the label securely on the back of the carton. It then imprints the lot number and the date on the label. The finished result is not only a neat-appearing package, but one which also permits ready access, protects the contents and instantly identifies the size and style of cartridge within the carton, the place where and the time when it was produced.

In addition to speeding up labeling and sealing, the makers of the labeling machine found that another operation in the packing of the cartridges needed attention in order to streamline the process by which 50 boxes a minute could be handled on each of the machines. This operation is the packing of the cartridges in the carton. In order to speed up the packing, the same engineers who made the labeler devised a machine equipped with twin hoppers in which the cartridges are "poured" after passing inspection. The first photograph accompanying this article indicates how cartridges are fed from one rotating hopper and deposited in an inclined trough at the base of which are two rotating rolls large enough to admit the cartridges "point down." In this incline they fit in a straight line. At the terminal of the incline a device deposits two cartridges into a partition of a conveyor, each partition of which carries two cartridges. An attendant merely slips the empty, partitioned carton over the bullet ends of the cartridges as they ap- (*Continued on page 106*)

* Vice president in charge of sales, New Jersey Machine Corp.





1. Cartridge cartoning feeder which feeds cartridges to attendant for packing at the approximate speed of 300 rounds per minute. 2. Perspective view of feeder unit showing one unit on a conveyor line with loaded cartons at the far end being labeled and sealed on labeling machine. 3. View of labeling machine which takes loaded cartons of small arms ammunition from conveyor belt, applies label-seal and imprints date and lot number on label. Insert shows three completed cartons ready for shipment.

(*Page 85*)

1

1. *Floors are kept dust free by the use of slightly moistened mops. Notice guard rail protection for electrical equipment in the background.*
2. *Automatic packaging machine has full enclosure for push bars, drives, etc. "T"-shaped weighted bar in top center of picture is an automatic stop should a package happen to come through the line out of place.*

Why Argo plant keeps its national safety record

*by George Currier**

They grind 90,000 bushels of corn every day, but there's nothing corny about the safety program at the Argo, Ill., plant of the Corn Products Refining Co. It is a program that makes it possible to grind, process and pack a tremendous amount of corn products in a remarkably safe manner.

Accidents? They have a few, but since the memories of the foremen runneth not to the contrary, a lost-time accident in the several packaging departments has been as rare as a single feature movie. Dust explosions? Lead poisoning? Packaging machinery, with all its poking, jabbing, spreading, folding mechanical gew-gaws? These are accident threats to make the hair of any accident prevention man stand on end! Yet every one of them has been whipped at Argo—taken in stride, calmly, and overcome.

There has been no case of lead poisoning for more than 10 years. The last case was noticed and the symptoms recognized early. The man was moved to another job and he recovered promptly with no ill after-effects. (They make their own tin cans at Argo and the lead poisoning hazard results from soldering operations.)

They haven't had a dust explosion since 1923. Concentrations of dust that might cause explosions are controlled by elaborate exhaust equipment. Fumes from the soldering operations are controlled in the same way—by exhaust equipment and personal respiratory devices where needed. These fumes, too, are held far below limits specified by law.

The packaging machinery departments have established safety records of almost unbelievable length and it is in these departments that the memories of foremen "have not runneth to the contrary" for years and years. If there are any technocrats still at large, they'll be glad to know that the packaging machinery departments of the C. P. R. Co. at Argo are one place where men and women have been the masters of their machines, instead of vice versa, for a long time.

Let's put the foreman of the dry starch packaging department on the stand. When did the last lost-time accident occur in your department: "Golly, I can't remember . . . at

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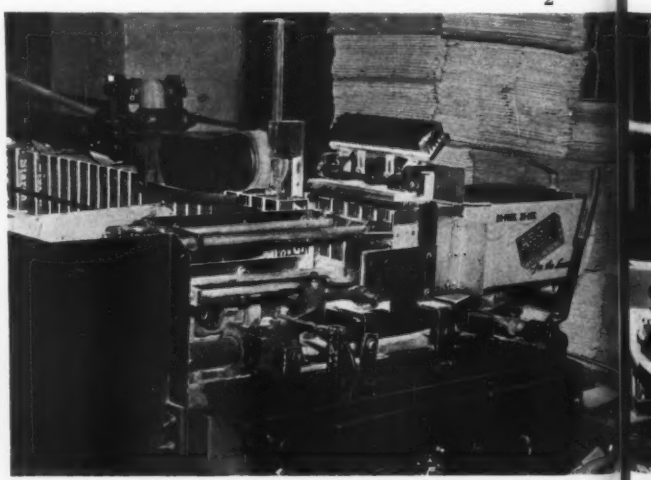

* National Safety Council.

least not since I've been here. Let's check the record."

So we got the accident statistics department on the phone. The answer: No lost-time accident for 11 years and that one suffered by a male employee. Never a lost-time accident suffered by a woman employee. The dry starch department has averaged 70 employees for years, most of them women.

The explanation: Neither the safety department nor the packaging department accepts a piece of machinery as it comes from the manufacturer as the last word, either in safe machine design or production efficiency. Corn Products Refining engineers built all the dust exhaust equipment in the dry starch departments—the dust always is picked up at its source. It is drawn off as the dry starch drops from the hopper into the paper shell. Another exhaust picks up dust that is stirred up over the agitators, which shake down the starch to insure full measure to the customer. The full length of the conveyor, from hopper to sealing machine, is covered by an exhaust canopy. All the pushers at the carton-filling end of the line have been closed by metal housings built in the Argo plant.

To every start-and-stop switch box for any of the packaging department machinery a locking device was added, to permit a repair man to padlock the switch in the "off" position whenever repair or maintenance work is being done on the line. The only man who has a key to the padlock in use is the repair man. This is a sure-fire way to prevent accidents which can occur when somebody thinks it's all right to throw the switch and put the machinery in motion.

Every light bulb in this department is in a dust proof enclosure as a further precaution against ignition by dust. No open flame lights, torches or electric drills are allowed to be used in dust-hazard departments. Every power lead to a motor in the packaging department enters the motor housing in conduit. Nowhere is "just an insulated wire" strung from a power outlet to the motor. All gear points and nip points are encased in wire mesh or solid metal guards.

Switch panels, doorways, blind aisleway corners bristle with safety signs: Danger—High Voltage . . . Beware—Don't Smoke or Carry Matches in This Department . . . Watch the Clearance on This Door. The bulletin boards all carry safety suggestions, posters and special warnings.

The danger of dust fires and explosions are, of course, the most serious hazard in the dry starch department. For additional insurance against explosions and fires, the department literally is dusted off continuously. Men with long-handled dusters brush down starch dust that accumulates on beams and other overhead parts. A crew of moppers mops the aisleways almost constantly. Other men, including machine operators, brush down machines, the panel cross-frames in windows, stock piles of empty cartons and every other place where thin layers of dust accumulate in spite of exhaust systems. At the end of each operating shift all machines are blown off with compressed air while the departments are not operating. The I-beams that support the ceiling have been cemented in to eliminate accumulation of dust on the two ledges on the under side of the beams.

In the can plant where clattering streams of tin cans and buckets run steadily, they've had a little bad luck. The foreman of this department apologetically admits one lost-time accident was suffered in his department in 1940. But he adds, hastily, that it was the first one since 1929.

Only one lost-time accident in nearly 13 years in a department where sheet tin is handled and machined into caps, covers, cans and buckets is a remarkable record, judged by any standard. Power cutting shears and punch presses are operated by the dozen. Point of operation guards were added by the company to every press and shearing machine in the place, and every operator is equipped with tongs and hooks for clearing the die point when a jam occurs. Anyone who puts his hands or fingers under the die would need more than a Philadelphia lawyer to absolve his guilt in violating a prime safety rule.

The Kremel department regrets two minor lost-time accidents in the last 11 years. This department also bristles with much but very effective dust exhaust equipment and many machine guards.

In the printing and carton department where the paper shells and the labels for cans are made, no lost-time accidents have been experienced since 1926.

The foreman of the Mazola (salad oil) filling department never has had a lost-timer charged against his department, nor did any of his predecessors have any such charges.

3. Automatic corn starch filling machine showing hood effects for dust control. Vertical and horizontal pipes near top of photo are for dust exhaust. Notice the hinged hood covers over scales (center foreground).
4. View of automatic pusher for filling cartons—the pusher bars of this machine are completely covered.

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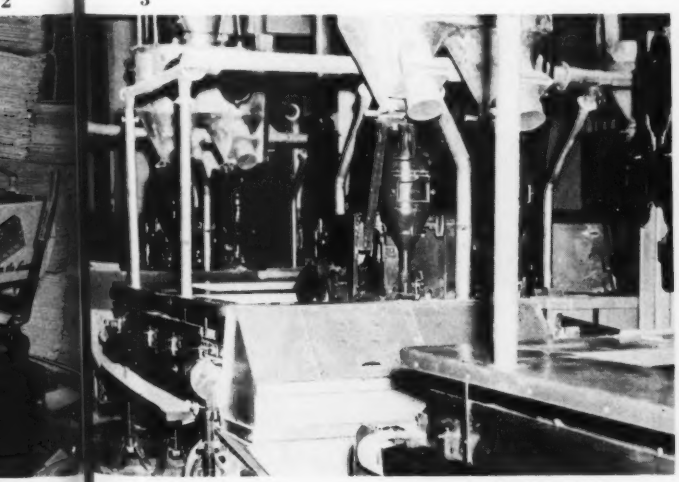

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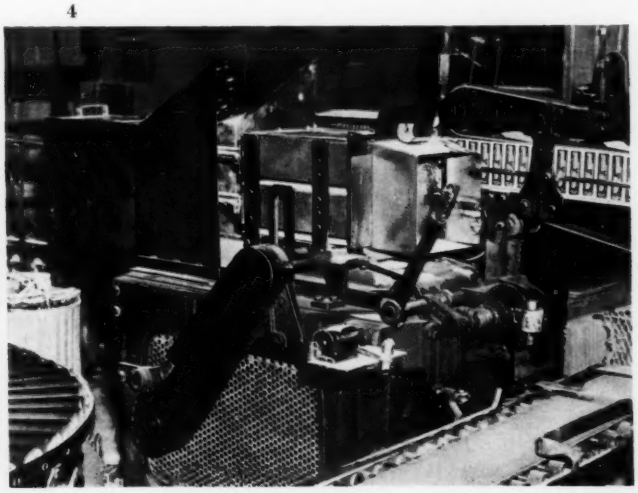

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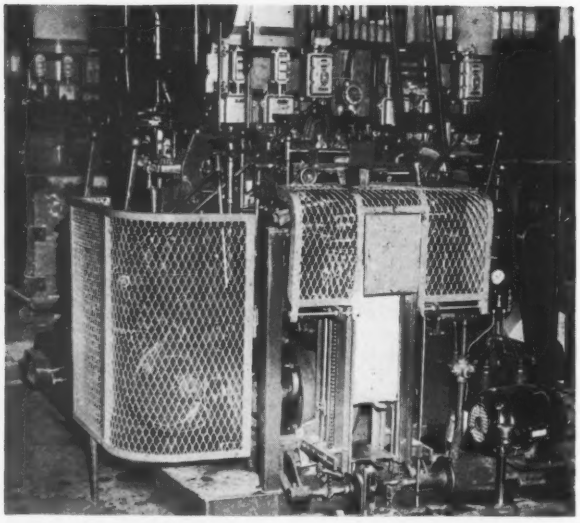

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On June 8, 1940, the company began the use of glass bottles in syrup filling at Argo for the first time. The plant safety director, as well as the foreman of the department, kept his fingers crossed against the threat of broken and breaking glass. Up to that date a strict safety rule prohibited taking a soft drink bottle or glass in any other form into the plant. The day I was at Argo they were unloading 31 carloads of empty glass bottles!

But in anticipation of possible glass hazards, careful design of the syrup filling line and excellent cooperation from employees has compiled a safety record that doesn't have a single blotch on it. Half a dozen guards were added to the bottle labeler. Pinch-point openings in the bottle conveyor line where the metal belt moved onto or off the drive sprocket were covered with metal guards. In brief, there was not one lost-time accident in any of the packaging departments during 1941, or through August of 1942.

There were, however, 14 lost-time accidents among the 2,000 employees at Argo last year. They were suffered by a carloader, a sweeper, a door tender, a mechanic's helper, a night machinist and others not employed in the packaging departments.

Still, on the basis of plant-wide experience, the Argo plant had an accident frequency rate (lost-time accidents per 1,000,000 man-hours) of only 3.30—lower than that of any other corn products plant in the country which reports to the National Safety Council. The second best rate wasn't even close—5.61.

Every practical production man knows that you can't foolproof a plant against accidents unless the attitudes of employees are favorable.

"Management will turn handsprings out here to guard everything," says the safety director, "and we'll keep everlastingly at improving the guards and maintaining the physical plant in the safest condition possible. But that's only a small part of it. Education! You've got to have employees who are educated to the belief that it's smart to go along with the safety program and cooperate wholeheartedly."

How well the safety department's educational program has functioned is best illustrated by the foreman of the Yards and Tracks department, with whom I spoke. In an explosion of good natured, enthusiastic wit, he told me, "I've got 50 men. I'll forgive 'em for any mistake under the sun. I don't care what it is. Except just one thing. I tell 'em, 'I don't care what you do, but don't have an accident!' "

The foreman wasn't putting on an act. And 10 years without an accident in his crew, which does many of the jack-of-all-trades jobs, is proof that his men understand him.

Similar forceful speech had another curious place in the training of women operators in the dry starch department many years ago. The foreman, who since has been promoted to a staff position, wasn't an expert psychologist, but he knew first impressions are apt to be lasting, and he was a safety

5. Man cleaning overhead points where starch dust accumulates in dry starch packaging department. "I" beams supporting the ceiling have been filled in to prevent dust accumulation. All light fixtures are dust tight. 6. Automatic Kremel pudding powder shell forming and filling machine. Cage and solid metal guards cover the danger points of the machine. 7. Complete guarding of a cap crimping machine, used for crimping covers on No. 10 syrup containers. All women operators are given special instructions regarding the danger points of each machine they are to use. Employee education plus protective guards on machines keep accidents down, safety high.

CONSOLIDATED EQUIPMENT Goes to War!

In the most distant outposts of this global war, wherever American troops are stationed, there are products which have been packaged by Consolidated packaging equipment. In hundreds of factories all over the United States, foods, drugs and chemicals are being sealed quickly and securely for our armed forces.

Special modifications of this same equipment have been developed for the U. S. Ordnance Department and these machines are speeding up production of Army and Navy ordnance material. Consolidated is proud of the part it has been called upon to play in this all-out war effort.

Although new Consolidated equipment is only available on satisfactory preference ratings, our regular service on parts and repairs is being maintained. Meanwhile, our Engineering Department is following closely the newest developments in packaging so that when peace finally comes equipment will be available which will allow you to fully utilize the new materials and practices which have been developed during the emergency.

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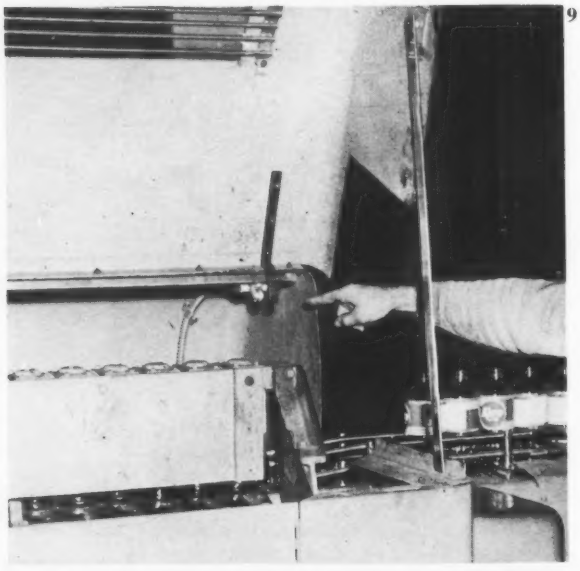

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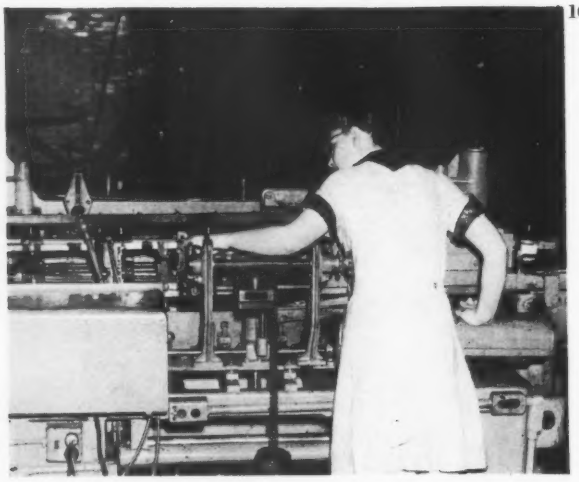

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enthusiast. Patiently, understandingly and courteously he'd show the new woman employee each step in the operation. For the clincher, when the woman was ready to be turned loose on her own, this foreman would blurt out, "And don't forget to keep your hands out of here and here and here!"

This foreman reached this emphatic climax in his instruction designedly, for emphasis to drive home that first impression. The "here and here and here" were the dangerous pinch points, and other points on the machine the woman was to operate.

In the years since safety was placed on a systematic, organized basis, it has been built around the original enthusiasm of such realistic, forthright men as that old timer who climaxed his safety instruction with a couple of strong words.

In the past 10 years, C. P. R. has spent $160,000 at Argo to improve rest rooms, locker rooms, etc., and approximately $150,000 to improve dust hazard protection. All employees are given a physical examination at the time of their employment and every two years thereafter, in the belief that the best way to prevent accidents is to hire physically fit people and encourage them to maintain their health.

Employees in the can department who are exposed to the possibility of lead poisoning have a blood count taken every two months, to discover any possible developing cases of poisoning at the earliest moment. The health and safety organization includes a well-equipped First Aid department, with a doctor and nurse in attendance throughout the first shift. The doctor is on call 24 hours per day and, during the second and third shifts, a trained First Aid man is on the job in the main laboratory of the plant.

As concrete evidence that the management wants the safety program to be a cooperative project, the Personnel department maintains suggestion boxes throughout the plant. Employees are encouraged to submit any suggestion that occurs to them with respect to safety, health, policy or any other phase of general plant efficiency. They respond with many suggestions every month—some practical, some not. But each suggestion is given careful consideration and credit is given where due.

The general safety plan is aimed at keeping the need for accident prevention conspicuously before the employees at all times. Some of the other ways in which this is done include such things as:

1. A safety organization among shop foremen and supervisors. These men are the prime movers of a safety program and they must be sold on the project first. Each group of supervisors meets every two weeks, seven months out of the year, for discussion of accident and personnel problems.

2. Departmental safety meetings, which are held about three times a year, on company time, with the safety director presiding. Each department also has its own meeting each month, with the foreman or supervisor in charge.

3. A Shop Safety Committee, (*Continued on page 110*)

8. Notice the corner metal protectors for corners of piles of filled cases. Safety bulletins, messages, etc., are stenciled on these metal corner shields and are changed frequently. 9. Partial view of pneumatic bottle sterilizer in bottle filling line. Operator is pointing to automatic stop switch. Machine will not operate while hood is in a raised position. 10. Labeling machine on syrup filling line. Operator rests her right hand on gear housing. Two sets of start-and-stop buttons are conveniently located. Machine is stopped automatically whenever bottles or labels get jammed. Machine is stopped in photo, so that the operator can adjust a part of the mechanism.

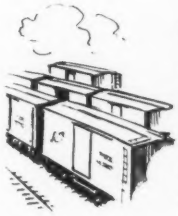
If you package or contemplate
PACKAGING DEHYDRATED FOODS
in pasteboard cans

by all means read the story of how this time-tested

WRIGHT HUMIDOR PACKER

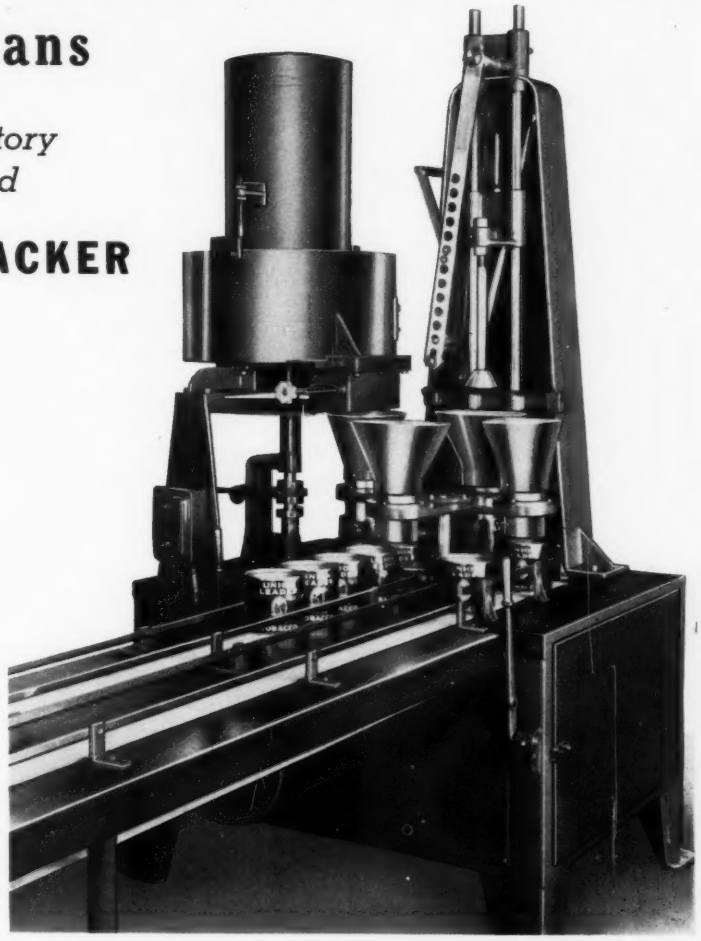
can replace

badly needed vessels so vital to the country's welfare at the present time. Learn how it can also . . .



Release many important freight cars costing many dollars and in dire demand for the transportation of munitions and other war goods.

Learn how this one machine can release thousands of man hours for vital war work at a time when our nation needs them as never before.



This little story is told briefly in a booklet which has been published by Wright's Automatic Machinery Company. Write for your free copy today . . . it may be a story of peculiar interest to you.

ESTABLISHED • 1893 •

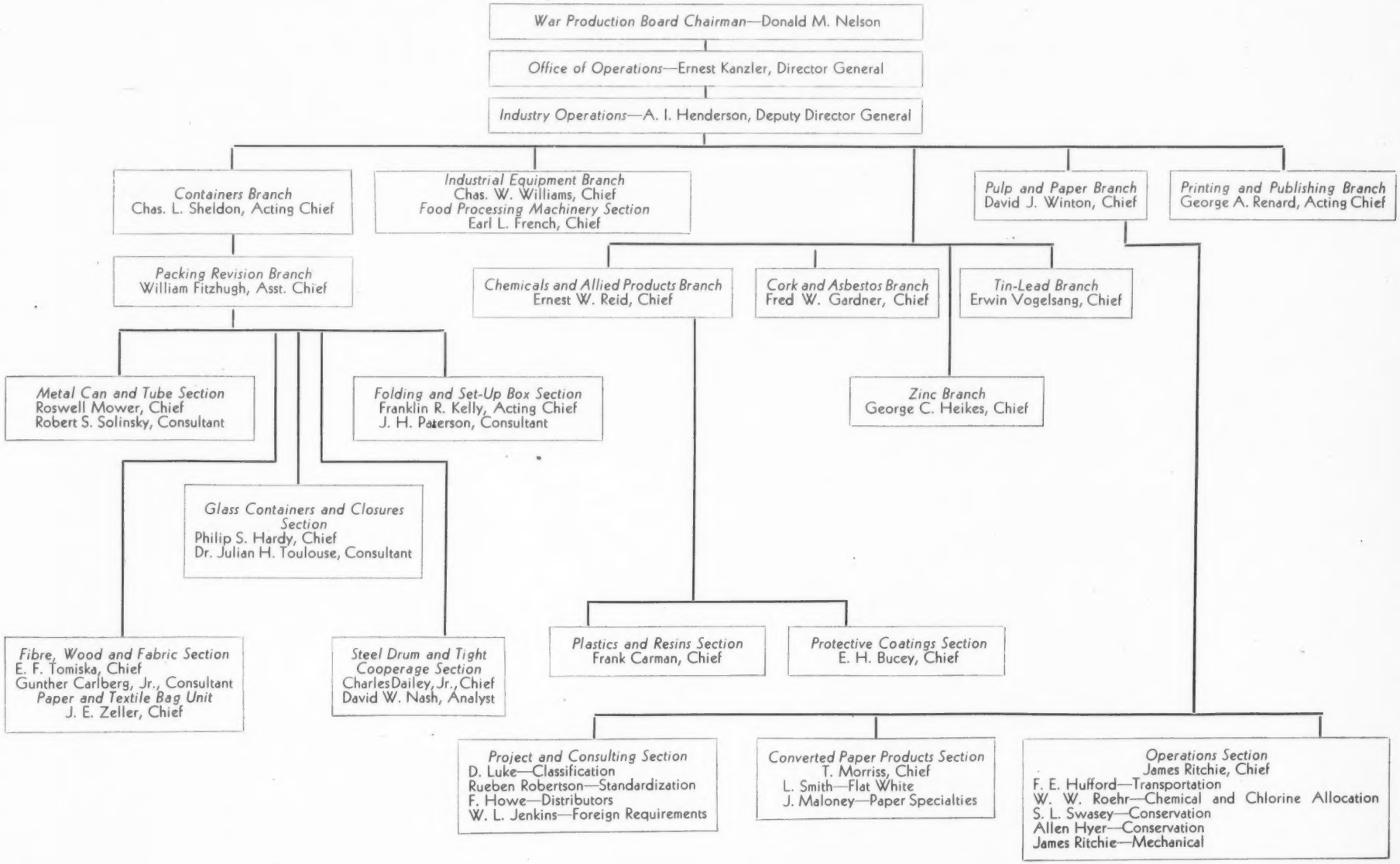
PACKAGING ENGINEERS

WRIGHT'S AUTOMATIC MACHINERY COMPANY

DURHAM CABLE ADDRESS YONWRIGHT NORTH CAROLINA, U. S. A.

WASHINGTON PERSONNEL CHART ON PACKAGING

This is a revised chart of WPB personnel on packaging, showing changes since the list was first published in July Modern Packaging. If you will compare this with the previous chart, you will note about 20 changes.



Good taste in packaging

Countless successful merchandising campaigns testify to the importance of good taste in packaging. The package that *sells* must have in addition to its physical properties a *fitting* appeal. It should not only catch the eye but should establish a desire for the product it contains. Marvellum Box Coverings have long been known for their high standards of design and color harmony. And there is an almost unlimited range of coverings to choose from in selecting just the right one for your product. Consult your local distributor or write direct to The Marvellum Company, *Papers Distinctive,* Holyoke, Massachusetts.

MARVELLUM BOX COVERINGS

Distributors in principal cities of the United States and Canada

WASHINGTON REVIEW

Summary of current restrictions and limitation orders

● **International Coordination**—WPB has announced establishment of a Canadian Division to handle Canadian priorities problems.

● **WPB Personnel**—Among the 20 or more changes in WPB's packaging personnel (see chart, page 92), Charles L. Sheldon has been named acting chief of the Containers Branch replacing Douglas Kirk, resigned. W. W. Fitzhugh is assistant chief taking specific charge of packaging revision with a special emphasis on consumer packages.

● **Packages to Reappear**—Empty store shelves, from which some items have disappeared because of prohibitive replacement costs, may be refilled with familiar brands as a result of an alternative pricing system being worked out by OPA.

● **Dehydration Schools**—Two schools under the sponsorship of the Dept. of Agriculture will be held for food dehydrators. One two-week session was conducted at Albany, Calif., beginning the middle of September and one will begin in mid-October at Rochester, N. Y. The courses, which will include packaging materials and methods, will be staffed by technicians from the Bureau of Agricultural Chemistry and Engineering, the Bureau of Plant Industry, Oregon State College, University of California and the Massachusetts Institute of Technology. No fees will be charged for the courses, but those attending pay their own expenses.

● **Interpretation of "New Product"**—General Limitation Order L-171 made certain provisions regarding "products" and "new products." Now comes Interpretation No. 1 (September 1) defining these terms more specifically. Toilet goods manufacturers who are concerned should obtain the complete Interpretation from the WPB.

● **"Operating Supplies"**—Preference Rating Order P-100 by Amendment August 28 specifically excludes packaging supplies, shipping supplies or containers.

● **OPA Concerned with Labeling**—Dexter M. Keezer, deputy administrator of OPA, August 18, amended the Federal Trade Commission's activity to control accurate textile labeling as helpful in keeping down costs of wartime living. "In the food field," said Leon Henderson, in appointing a new division to attack hidden price increases, "war has compelled changes in packaging. Glass has replaced cans in a number of things and the armed forces are using whole crops of some foods. Shortages are inducing concealed quality changes and in some cases misbranding and up-grading.

● **Not Under Price Control**—Because government purchases absorb almost entire dehydrated output, sales and deliveries of dehydrated vegetables to the armed forces and any government purchasing agency are excluded from provisions of the General Maximum Price Regulation, effective September 2.

● **New Specifications for Ration K**—U. S. Army Field Ration K packaging forms have been reduced from 5 to 2. The new specifications should be obtained in their entirety from the Quartermaster Corps by manufacturers of these different packages.

● **Scrap Collection VITAL**—The situation calls for no let-up in efforts to collect scrap steel and rubber. If kitchen drive for old tin cans is successful, yield will be 3,000 tons of pure tin and 297 tons of steel scrap per year. Detinning capacity has been increased by order of WPB.

Meeting September 4, newspaper publishers listened to WPB officials explain scrap objectives and voted to conduct campaigns throughout the country. Unique drive for old keys, conducted by Paper & Twine Club merits support. Objective is collection of high grade scrap, nickel, silver, etc. Net proceeds will be presented to the USO.

Supplementary Order M-24A has been revoked and its provisions incorporated in Order M-72A which covers the entire field of tinned and detinned scrap.

OPA has placed a price ceiling of $6 a ton on used No. 10-size tin cans of the type sought for plate from which beverage bottle caps may be punched.

● **"Relative Scarcity"**—Three-group report on availability of existing supplies prepared by the Conservation Division of WPB places in group 1 (very critical) practically all packaging metals such as aluminum, tin and tinplate. Also phenol derivatives (important ingredients of plastics packaging material). In Group 2 (essential but not seriously critical) are found silver, chlorine, cellophane, cork, urea formaldehyde, animal and vegetable glues, vinyl plastics. In Group 3 (available in significant quantities) are lead, asphalt, ceramics, casein, lignin, paper, paperboard, plywood, pottery, titanium pigments.

● **Cellophane Windows**—Candy cartons may not use cellophane windows by recent interpretation of the July amendment to L-20 which permits windows in food packages.

● **Agave Fibre**—None will be permitted for production of ordinary wrapping twine after September 30 by Amendment to Order M-84. Use will be restricted to cordage used by armed forces and in the shipment of war goods.

● **Tin**—WPB's Compliance Branch announces a study of the operations of some 280 firms to determine their degree of compliance with WPB Orders issued to conserve this very critical material.

September 8 Interpretation of Conservation Order M-81 provides that a canner packing a product for which a seasonal base period has been specified may use his 1940–1941 pack quota during the 1942–1943 packing season.

● **No Metal for Lubricating Oil**—Though Supplementary Order M-81B gave until September 30 for manufacture and use of terneplate for lubricating oil containers, this was revoked September 2 except for sale to government agencies. No restriction is placed on sale of goods now packed.

● **"Free" Silver**—The Treasury is loaning 5,000,000 oz. of its silver holdings (in excess of currency requirements) for use in war industry.

● **Steel Drums**—Limitation Order L-197, issued September 14, gives long list of products which can no longer be packed in new or second-hand steel shipping drums after November 15. Items affected are approximately 200 food, chemical and petroleum products.

● **Thermoplastics**—Amendments to M-154 (1) changes this order to a Limitation Order and extends date for scheduling; (2) restricts use of polyvinyl butyral to war orders except by authorization; (3) prohibits disposal of methyl methacrylate sheet scrap except in order to re-process into sheeting.

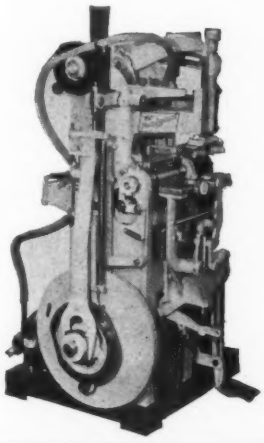
● **Rubber**—Revision of M-15b issued August 25 consolidates original order M-15b and 13 amendments. New form, very comprehensive, provides that consumption of crude rubber, latex, reclaimed rubber, and scrap rubber in all civilian products will be permitted only on specific allocations by the Director General for Operations. Rubber users should obtain copy of complete order.

● **Glass and Closures**—Limitation Order L-103 was revised September 12. Provides schedule C for glass containers for preserves and jellies and schedule D for containers for wines.

● **Printing and Publishing**—Periodically this branch of WPB issues a convenient résumé regarding orders in force or releases regarding those products which are important to the industry.

RELIEF *to* THOUSANDS *in* DRUGS
ANTISEPTICS *and* FIRST AIDS...

have Label-identification and directions applied by



LABELRITES..

Our hats are off to the "girls in white"—Nurses, their Aides, and Pharmaceutical workers. Hundreds of them will be handling precious relief, labeled on NJM *Pony Labelrites* such as the one shown at left. *It's worth waiting for "priorities" to ease off, to get the many benefits of* NJM *Labelrites.*

NEW JERSEY MACHINE
CORPORATION
1600 Willow Avenue . . . Hoboken, N. J.

CHICAGO OFFICE, 325 WEST HURON STREET
● *Sales and Service Representatives in 12 Industrial Centres!* ●

U. S. patent digest

This digest includes each month the more important patents which are of interest to those who are concerned with packaging materials. Copies of patents are available from the U. S. Patent Office, Washington, at 10 cents each.

KIT FOR MANICURE IMPLEMENTS AND THE LIKE. P. M. Gold (to C. J. Bates & Son, Chester, Conn.). U. S. 2,292,029, Aug. 4. A manicure kit relatively flat and thin, consisting of a pair of wall parts of substantially the same size and shape formed from a relatively flexible material and jointed together at their bottom and opposite side marginal edges with their top edges spaced apart so as to provide a flexible pocket and an open upper side to the kit.

TEA BAG. W. B. Downes, Sharon, Mass. U. S. 2,291,702, Aug. 4. A tea package comprising three layers of liquid permeable material, two of which are secured together at marginal edges to form a chamber adapted to retain the leaves, and third layer made to fit to bowl of a spoon and keep it retained to spoon.

CONTAINER. J. M. Hothersall (to American Can Co., New York, N. Y.). U. S. 2,293,060, Aug. 18. A one-piece container comprising a tubular body having side walls, pairs of inner and outer overlaying end closure flaps formed integrally with said side walls and folded inward along fold lines and sealed together to close the ends of said body.

BOX STRUCTURE. W. H. Inman (to Bloomer Bros. Co., Newark, N. J.). U. S. 2,293,342, Aug. 18. A box adapted to be formed into initial, collapsed condition upon folding a flat blank of paperboard sheet material on only two of the fold lines.

PACKAGE. J. H. Stroop (to the Pad-Y-Wax Co., Inc., New York, N. Y.). U. S. 2,293,952, Aug. 25. A commodity package comprising a single sheet of flexible, heat sealable packaging material doubled upon itself along one edge of the package to form a rectangular envelope.

COMBINATION CONTAINER AND DISPENSER. H. Daly, New Brunswick, N. J. U. S. 2,294,224, Aug. 25. In combination with a container having an enlarged bottom portion, a centrally disposed longitudinal bore and, terminating short of the bottom side, a dispenser constructed of a desired material.

SHIPPING AND DISPENSING CONTAINER. C. W. Vogt, Norwalk, Conn. U. S. 2,293,182, Aug. 18. A container including a carton having inner and outer flaps foldable to form an end closure and a flexible bag therein having a side wall folded to form a pleat, representing a pair of juxtaposed parallel layers.

PACKAGE. W. C. Calvert (to Wingfoot Corp., Wilmington, Del.). U. S. 2,293,589, Aug. 18. A package of material which comprises a flexible rubber hydrohalide film which becomes brittle on exposure to light, so part of the package has a cover for hydrohalide, in order to filter out light rays.

GARMENT BAG. H. Patch (to Richard, Boggs & King, Inc., Chicago, Ill.). U. S. 2,293,625, Aug. 18. A garment bag having suspension means associated therewith with thin flexible sides.

BOX. R. Carnwath (to Pennsylvania Box & Lumber Co., Philadelphia, Pa.). U. S. 2,294,279, Aug. 25. A box made of a plurality of wall units each comprising a panel member of thin material with marginal frame members extending completely around edges.

PACKAGE. F. D. Palmer (to Sealtest, Inc., Baltimore, Md.). U. S. 2,292,653, Aug. 11. A package comprising a paper board outer container and a bag-like inner container lining same.

CONTAINER FOR BEER AND OTHER PRODUCTS. H. Gerhard, New York, N. Y. U. S. 2,294,292, Aug. 25. A container with sheet metal top and scored area thereon and adapted to be torn from said member for forming a pouring spout.

PLANT LABEL. I. W. Hirschfield, New York, N. Y. U. S. 2,292,272, Aug. 4. A plant label of sheet of flexible water resistant material adapted for marking on face name of a plant and having a coating of non-drying waterproof adhesive on its other face.

LABELING MACHINE. H. A. E. Sjobert and F. A. Craig (to Economic Machinery Co., Worcester, Mass.). U. S. 2,292,093, Aug. 4. A labeling machine having an article support and movable label carrier and means operative to move the carrier back and forth from label-gumming to label-applying position.

METHOD OF FILLING AND SEALING RECEPTACLES. T. M. Royal, Philadelphia, Pa. U. S. 2,292,295, Aug. 4. Method of filling and sealing an open-mouthed receptacle of thermoplastic sheet material having a valve aperture in its body adjacent the mouth thereof.

METHOD OF PACKAGING ARTICLES. R. E. J. Nordquist (to American Can Co., New York, N. Y.). U. S. 2,291,645, Aug. 4. A method of packaging articles which comprises assembling a plurality of the articles into a group.

MACHINE FOR WRAPPING PAPER. C. Stevens, Wellston, Ohio. U. S. 2,292,487, Aug. 11. A wrapper and sealing machine including a structure having a well, a feed table, a moving table in the well, means for feeding a wrapper downward into and across the well, and movable means below the feed table and beyond one side of the well for engagement by the advancing end of the wrapper support.

MACHINE FOR WRAPPING EXPLOSIVES. D. D. Huyett (to Atlas Powder Co., Wilmington, Del.). U. S. 2,293,061, Aug. 18. In a wrapping machine, a winding head for a web of wrapping material comprising a plurality of winding rolls, means for feeding material to be wrapped into position to be engaged and rotated by said roll, and means for feeding a sheet of wrapping material to said rolls.

SYSTEM FOR CLOSING AND SEALING CARTONS. G. B. First and H. Gotewold (to Stokes & Smith Co., Summerdale, Philadelphia, Pa.). U. S. 2,293,498, Aug. 18. Means for closing cartons having sides of different widths.

CARROT PACKING MACHINE. W. Dodge, Oakland, Calif. U. S. 2,293,937, Aug. 25. A machine for discharging, weighing and packing carrots.

METHOD OF AND APPARATUS FOR MAKING CONTAINERS. J. Y. Albertson (to Stokes & Smith Co., Summerdale, Philadelphia, Pa.). U. S. 2,294,220, Aug. 25. Method of making a container which comprises sheet material and attaching margins thereof to each other to form a tube, flattening the tube at least at one end and adhesively attaching to each other opposite sides of the flattened end to form a seal.

APPARATUS FOR PACKING. E. K. Buxbaum, London, England. U. S. 2,294,275, Aug. 25. Means for closing the mouth of the container upon the contained goods during step by step motion of said container through said machine.

MACHINE FOR APPLYING LABELS OR THE LIKE. J. A. Heckman (to Miller Wrapping and Sealing Machine Co., Chicago, Ill.). U. S. 2,294,297, Aug. 25. In a machine for applying labels, the combination of a hopper for labels, a label feeding receptacle mounted for movements toward and from the discharge end of the hopper.

UNIQUE FLEXIBLE SERVICE FOR PAPERBOARD CONVERTERS

Laminated **papers and paperboards give moisture and grease resistance for many food and tobacco conversion packages.**

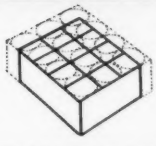
Ridgelo
CLAY COATED
REG. U.S. PAT. OFF.

PROTECTIVE PACKAGING MATERIALS

do these things well-

Coatings **for grease and moisture protection fill a need for packaging certain foods, metallic articles, powdered materials.**

Coating bases **for varnish and other external applications meet the need in "bag-in-box" containers.**



SAVING SPACE

Remember too that rectangular cartons save one-third the space in vital shipping and storage space.

Let us send you samples for trial based on your own requirements. We believe our development work can help you.

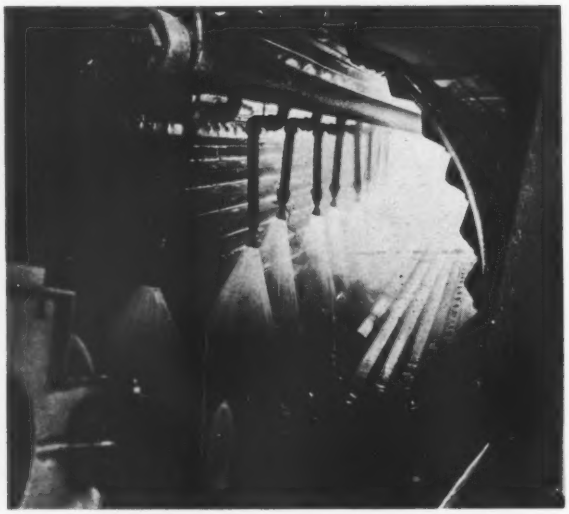
★ Ridgelo ★
CLAY COATED
REG. U.S. PAT. OFF.

BOXBOARDS · CARDBOARDS

MADE AT RIDGEFIELD, N. J., BY LOWE PAPER COMPANY

Representatives: E. C. Collins, Baltimore • Bradner Smith and Company and Mac Sim Bar Paper Company, Chicago • H. B. Royce, Detroit
Gordon Murphy and Norman A. Buist, Los Angeles • A. E. Kellogg, St. Louis • Philip Rudolph & Son, Inc., Philadelphia

Equipment and Materials



SPRAY NOZZLES

An illustrated folder has just been issued by the Chain Belt Co., describing its spray nozzles. The nozzle itself is described as a non-clogging device which throws a flat fan-like, hard-hitting spray with such force that it removes dirt and grit from the most irregular surfaces. The high velocity spray is so concentrated that it produces an extremely thin line of impact which amounts to a sharp cutting action. The device was originally developed for cleaning traveling water screens and because of its effectiveness has since been adapted for many other purposes including the washing of canning equipment, bottles, etc.

GREASE-MOISTURE-PROOF BOARD

A substitute packaging material which may be used for dehydrated foods and the like, according to its manufacturer, The Butterfield-Barry Co., Inc., is a board, the composition of which is the laminating of glassines of various degrees of grease-proof-qualities, depending upon the material to be packed, to a sheet of boxboard using an amorphous wax as the adhesive medium. The wax, mixed with other ingredients, forms an unbroken, practically moisture-proof film between the glassine liner and the board. To date, the company states, cartons made from its new board have replaced tin coffee containers and successful tests have been made on potato chips and salted nuts. Tea balls and powdered carborundum are being successfully packed and various other products are now under test. Previous use of the board has been made by the bakery industry, where the board has enabled bakeries to eliminate the day-to-day pick-up since the moisture-proof film prevents the absorption of moisture from the product to the board and thus preserves the freshness of the product.

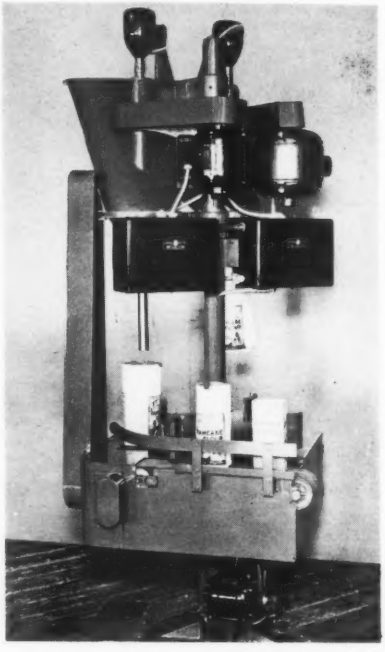
THERMO-SETTING PLASTICS

Makalot Corp., of Boston, announces a new line of thermo-setting plastics, called "K.E.M." Originally developed as an extender of the limited quantities of phenol, these compounds were produced with small amounts of this critical material, ranging from those containing 4 per cent phenol to 20 per cent phenol content. These materials, many of which the manufacturer claims are suitable for closures and other packaging applications, can barely be distinguished in most characteristics from the straight phenolics, but government restrictions on even those small quantities of phenol prevent any civilian use at present. The corporation's "K.E.M." 100, containing no phenol as such in its formulation and therefore free of government control, represents a new thermo-setting plastic which, though admittedly inferior to the phenolics, the firm states, offers a definite remedy for the desperate condition of civilian molding. The material is supplied in a complete flow range and is adaptable to both compression and transfer molding procedure.

The corporation also announces the availability of its laminating varnishes and bonding resins comparable in formulation to the "K.E.M." compounds and reports they are suitable either as the binding agent for inside sheets of a laminate or as extenders in general for phenolic materials of this type.

IMPROVED PACKER-WEIGHER

Recent improvement has been made in the J. L. Ferguson Co. two-station automatic auger packer-weigher for flour, according to a recent announcement. Improvement includes a new type of motor and auger drive and enclosure of operating equipment. The machine fills and packages flour and other powdered products into bags, cans or similar type containers. Only one operator is required to register the container on the packing station tube and trip a foot lever. Packing platform rises to correct level and



starts operation of auger, which fills and packs a pre-determined quantity. Auger stops, platform lowers and carrier arm transfers package to platform of the gross weigher, where filling operation is completed. Package then discharges on to belt conveyor for delivery to closing operation. These operations are fully automatic. Machine is rapidly convertible for different weights and sizes of containers, the company states, by means of interchangeable augers and tubes, adjustment of packing stroke and setting of gross weight scale. It will handle from $^1/_2$-lb. to 5-lb. weighings, can be constructed with modifications for up to $12^1/_4$ lbs., operates from 18 to 20 per minute on 5-lb. weighings.

Tapping a rubber tree in Malaya. The latex flows along the cut and into the cup. *Courtesy of United States Rubber Company.*

Rubber?

Let's Look Ahead!

MODERN chemistry has already evolved replacements which may *completely supersede rubber.*

NATIONAL'S laboratories have developed adhesives which are successfully doing the work of latex and rubber cement in many industries — thus helping, in a small way, to ease the present shortage. We mention this as typifying what our chemists and research engineers are doing in meeting new problems which are arising almost daily.

The changing picture has undoubtedly affected *your* adhesive requirements in one way or another. If you will tell us the facts, we should be able to be of timely service.

NATIONAL ADHESIVES

DIVISION OF

NATIONAL STARCH PRODUCTS INC.

820 GREENWICH ST., NEW YORK—CHICAGO—PHILADELPHIA—BOSTON—SAN FRANCISCO—and All Principal Cities

Plants and People

Dr. Robert Diehm

Walter P. Paepcke, president of Container Corp., announces the appointment of Dr. Robert A. Diehm as technical director. Dr. Diehm comes to the corporation from the Rohm and Haas Co. of Philadelphia where he devoted his time to research problems from 1929 to 1937 and to sales problems of a technical nature, until July of this year. He is a member of the Technical Assn. of the Paper and Pulp Industry and the American Chemical Society, among others.

The Chicago Label and Box Co. of 312 N. May St., Chicago, will be merged, as of September 30, with the American Coating Mills, Inc. The name, "American Coating Mills, Inc.," will be used in the future. The Chicago Label and Box plant will continue to operate as a production division of the American Coating Mills, Inc., at its present location and the sales offices will be moved into the latter's branch sales offices in the Wrigley Bldg., Chicago, and the executive offices will be moved into the American Coating Mills' offices at Elkhart. There will be no personnel changes. American Coating Mills, Inc., however, announces the election of the following new vice-presidents: H. S. Rish, in charge of purchasing and traffic; J. C. Hendricks, Jr., in charge of sales and advertising; and B. M. Thomas, in charge of production and engineering. Other officers of the company are Richard L. Snideman, president and general manager; C. C. Colbert, chairman of the board; and C. W. Dunnington who is the secretary and treasurer.

In addition to S. J. Steele, executive vice-president of the company for a number of years, with headquarters in Chicago, the directors of Continental Can Co., Inc., have elected Frank J. O'Brien an executive vice-president of the company, with headquarters in New York. Mr. O'Brien has been vice-president in charge of manufacture for the past six years, prior to which he was general manager of production for the company. He has also been a director of Continental Can since March 1938.

Sidney Hollaender, president of the Ever Ready Label Corp., on the occasion of his 50th birthday, was given a celebration by all his employees. He was presented with a parchment scroll, signed by Ever Ready employees, and a watch.

C. E. Beckman and R. L. Drysdale, Counterboy Packing instructors of Chicago and Syracuse, N. Y., respectively, have received leaves-of-absence from Better Packages, Inc., Shelton, Conn., manufacturers of tape sealing equipment, to become supervisors of packing and shipping for the War Department. Mr. Beckman is now with the Detroit and Mr. Drysdale, with the New York Ordnance Districts. These two men enter the Ordnance Service with a background of many years practical knowledge covering all phases of shipping room methods.

Richard F. Neff has been appointed general sales manager for the Sutherland Paper Co. of Kalamazoo, Mich.

A special meeting of the stockholders of Sterling Products, Inc., will be held October 15 in Wilmington, Del., to vote upon a recommendation of the Board of Directors that the corporate name be changed to Sterling Drug, Inc., according to James Hill, Jr., president of the company. Mr. Hill also announced that the "Sterling" name will appear for the first time on packages containing many of the company's well-advertised popular drug products and that the company's many well-known brand names will be retained.

Techtmann Industries, Inc., will be the new name of the Pack-Rite Machine Corp., 828 N. Broadway, Milwaukee, Wis., with Pack-Rite Machines being continued as a Division of Techtmann Industries, Inc. Since Pearl Harbor, Pack-Rite has developed and is manufacturing war-use industrial tools and machines in addition to Pack-Rite packaging machines.

Albin K. Schoepf, president of General Printing Ink Corp., announces the advancement of John F. Devine to operating vice-president of the corporation.

Patriotically turning over its two plants for conversion to munitions manufacture, The Butler Paper Products Co. has moved from the war production district of Toledo to new quarters on Wall St., Toledo, O., it is announced by F. Norman Hartmann, vice-president. At this new location, Butler operations are now housed under one roof in a large modern structure. The company is prepared to manufacture cartons for packaging war items as well as a complete line of paraffined cartons for the food industry. Installation of modern manufacturing equipment has geared this plant for increased efficiency in carton manufacture, according to Mr. Hartmann.

With the Industrial Salvage Section, Conservation Division of the WPB, participating, the National Chemical Exposition, set for November 24 to 29 at the Sherman Hotel in Chicago, will help to contribute to the war effort. Arrangements have been concluded by the Industrial Salvage Section with the Chicago Section of the American Chemical Society, sponsor of the show, for adequate space for an educational exhibit which will stress the campaign to salvage approximately 100,000 lbs. of essential chemicals.

Miss Loraine Fawcett, who has devoted many years to the study and use of color and conducted classes designed primarily for people in industry, will give a series of color classes at her studio, 527 Fifth Ave., New York City, beginning October 13. The color theory presented at these classes is based on the Munsell System of Color, which has been adopted by many organizations.

OBITUARY

Label Manufacturers National Assn. announce the death of Herman J. Meyering and of his son, Richard B. Meyering. Mr. Herman Meyering died August 20 and his son, on September 3. The former began his work in the lithographing industry with the old Karle Lithographic Co. in Rochester, N. Y. In 1913, he became one of the founders of the Genesee Valley Lithograph Co. and served continuously as president until his death. Richard B. Meyering had been associated with the company for 20 years, serving as vice-president and general manager.

Harry V. Wallace, vice president and director of sales of the Kimble Glass Co., died at his home in Vineland, N. J., on Sept. 15. Mr. Wallace had joined the glass company in 1931 and in 1939, he became vice president and director of sales.

Isaac W. England, vice president of the Continental Can Co., died on Sept. 18 at Glen Springs, N. Y., where he was spending his vacation. He was 68 years old. In 1912 he founded the Passaic Metal Ware Co. and was its president until 1928, at which time it was merged with the Continental Can Co.

WE'RE HELPING TO KEEP 'EM ROLLING....

FOODS for our fighting men, foods for war workers, foods for civilians. These and many other glass-packed products are now rolling from the production lines of hundreds of manufacturers in steadily increasing quantity.

Because Crown has the "know how" to operate efficiently under present-day conditions, we're helping to "keep 'em rolling" by supplying dependable closures in tremendous volume.

Considerable progress has been made in developing satisfactory materials to replace those appropriated by war, and today, as in the past, you may be sure that Crown Closures are the finest that can be made within the limits of government sanction.

CROWN'S WARTIME POLICY: *To supply closures, containers and services for packaging foods, beverages, chemicals, etc., needed by civilians and the armed forces. To build an ever-increasing volume of vitally needed weapons of war for our fighting men.*

CROWN CORK AND SEAL CO., BALTIMORE, MD.
World's Largest Makers of Closures for Glass Containers

For the last word in closures . . .

COME TO CROWN FIRST!

For Your Information

In the August issue of Modern Packaging, beginning on page 60, an article entitled, "Silver Linings," by Adolph Bregman was published. This article discussed the use of silver lining for metallic containers of all varieties, pointing out the advantages in the use of silver, especially under the present shortage of tin. In the third paragraph of this article, the statement was made (which was true at the time of writing) that silver was not yet under priority control. Events today move so rapidly, however, that this statement was obsolete by the time the issue was out. Silver Conservation Order M-199, issued July 29, 1942, has prohibited its use for many purposes. It is necessary to point out, however, that silver is still available for needed war and civilian uses and that these uses include a number of food packages.

A new display folio, Christmas and Winter—1942, containing a variety of patriotic displays with Christmas themes has recently been published in six colors by Bulkley, Dunton & Co., display papers division. Designs contained in this brochure were created by the artist, Robert Reinhardt von Liski. Copies of the brochure are available upon request to the company.

"What's Your Name Worth?" is the title of the latest booklet by The Crowell-Collier Publishing Co., which is issued as "a reminder to every manufacturer converted to wartime production or whose production is curtailed by current wartime requirements." The booklet contains a simple test to give the reader an idea of what happens to established trade marks and trade names when advertising stops. The booklet points out to those who would curtail advertising during the war period that as advertising is dropped or thinned out and loses its cementing quality, markets disintegrate and become individuals again and the whole slow, expensive process of cementing them together must be repeated. It is cheaper, the editors of the booklet state, to hold a market than to re-acquire one.

Victory Display Committee of the International Assn. of Displaymen through its chairman, Trowbridge H. Stanley, states that many retailers have requested a list of names of manufacturers supplying victory displays, posters, etc. The Committee wishes to give these retailers as complete information as possible and in order to do so, Mr. Stanley suggests that display manufacturers write him c/o L. A. Darling Co., Bronson, Mich., advising the committee of available catalogs, circulars, pamphlets, etc.

Molders who want to replace worn or damaged molds with new ones will be helped to do so by using a plan that is being encouraged by WPB. The plan is a simple one and is not entirely new in that it is similar to plans that are being used in other industry circles. The plan calls for a trading in of old molds for new ones on a pound for pound basis. It operates in this way: When a molder who needs a new mold sends in his PDIA or PD25F to WPB, he should enclose a letter stating that he has an old mold or molds of comparable weight to turn in to the mold maker in trade for the metal that is to be used in the new one. Under this plan the molder's application will be given more favorable consideration. The priority assistance granted will be conditioned on his turning in the old metal and this condition will be noted on the priority certificate when issued. This plan, however, will only be given a favorable reception by WPB where the new mold is going to be used to turn out essential products. It cannot be used to replace molds which are used for non-essential civilian orders. The whole purpose of the plan is to conserve metal, facilitate defense production and help to make new molds available to the plants that are cooperating in the war effort.

A new booklet by The Hinde & Dauch Paper Co. points the way to shipping room economies. "How to Ship More Economically in Corrugated Boxes" contains timely suggestions for cutting expenses without reducing packing effectiveness. The booklet covers every phase of shipping from the time corrugated boxes are received—through storing, packing, sealing, stacking and loading—until the packed boxes reach their ultimate destinations. Four actual examples are cited and illustrated. Copies of the booklet are available upon request to the company.

The Packaging Institute will hold its annual meeting November 5 and 6 at the Hotel New Yorker, New York City. Theme of the meeting will be Wartime Packaging and its sessions will consist of round table discussions with question-and-answer periods. Full details of the program will appear in the November issue of Modern Packaging.

"Vinylite Resins, Their Forms, Properties and Uses" is the title of a 20-page illustrated booklet just released by the Plastics Division, Carbide and Carbon Chemicals Corp., Unit of Union Carbide and Carbon Corp. It describes briefly the four major types of vinyl resins and the various plastic materials produced from them including rigid sheets, flexible sheeting and film, molding and extrusion compounds, adhesives and resins for surface coatings. In addition, the booklet contains tables of properties as well as charts showing the principal applications of vinylite plastics. Manufacturers interested in essential civilian or wartime applications may obtain copies by writing the corporation at 30 East 42nd St., New York City.

"Plastics" by J. H. DuBois has just been published by the American Technical Society, Chicago. Mr. DuBois is a sales engineer in the General Electric Plastics Dept., employed at the Fort Wayne, Ind., factory. The book begins with a general introduction to plastics, defining fundamentals and terminology. The author then takes up the various types of materials separately, indicating their sources, manufacture, variations, properties and applications. These materials include phenolics, ureas, cellulose, acrylic vinyl and styrene, cast phenolic and protein plastics, mycalex, nylon, lignin, resin-bonded plywood, and synthetic rubber-like materials. There is also a discussion of some of the older cold-molded and shellac plastics and a chapter on laminated plastics describing the composition, properties, fabrication and uses of them. Subsequent chapters deal with the methods of manufacture of plastics products, including molding, finishing and decorating. A final chapter on the design of plastics molded products describes the practices resulting in most satisfactory moldings at minimum cost.

Well-illustrated and informative issue No. 8 of Acme Process News, house organ of Acme Steel Co., shows how a wide variety of war shipments are protected in transit. Included are details of the strapping of such items as lend-lease food supplies, cranes, candy, bricks, cargo trailers, medical supplies and other products.

Silk Screen Color Printing by Harry Sternberg. McGraw-Hill Book Co., Inc., New York. Silk screen prints have grown steadily in popularity, but there is considerable confusion concerning the exact technique involved in making a silk screen print. This book with its clear-cut analysis of the process will do much to make the technique generally understood. The plates in the volume tell the story and simple text is designed to accompany them. A leaflet on the book explains that silk screen is an ideal technique for producing posters in small quantities.

Forsman—

for 43 years

the standard

of Fine

Color Printing

C · H · FORSMAN CO · NEW YORK

Designing, Fine Color Printing and Embossing

Read this along with your war contract

Every 10 rounds of rifle ammunition has its container
1. Small arms ammunition and machine gun cartridge belt links are packaged in folding cartons.
2. An ingenious folding carton designed to hold two clips of rifle cartridges.
3. Specially designed corrugated shipping container used to ship gas mask cans from the manufacturer to the assembly plant.
4. Fibre board shipping container and inside partitions for Springfield rifle.
Working with government agencies, the laboratories of Container Corporation of America have developed special packages to assure practical, low cost handling of war materials.
CONTAINER CORPORATION OF AMERICA

NEW BOOKLET ON PACKAGES THAT MEET MILITARY AND LEND-LEASE SPECIFICATIONS

To EVERY prime and sub contractor with a war contract—or prospects for one—this illustrated booklet is written, the first to put together much of what has been successfully achieved in the development of packaging for war products: ammunition, foods, parts, sub-assemblies and finished units for military and allied uses.

We at Container Corporation have done a great deal of the work in applying corrugated and solid-fibre board, folding cartons, tubes and other paperboard materials to this specialized field. Our laboratories have worked directly with Government departments in developing wartime packages that expedite handling, cut out costly waste and damage, save time, materials, shipping space and costs.

This booklet outlines specialized experience in this specialized field. Write for your copy today—there is no obligation or charge.

CONTAINER CORPORATION OF AMERICA
111 W. Washington St., Chicago, Ill.

Please send me immediately a copy of "Paperboard Goes to War," your new book on wartime packages.

*Name*_____

*Company*_____

*Address*_____

*City*_____

*State*_____

CONTAINER CORPORATION OF AMERICA

111 W. Washington St., Chicago, Ill., and 22 other strategically located cities

EVERYTHING PAPERBOARD FOR EVERYTHING PACKED

Weatherproof cases

(*Continued from page 41*) serviceability of their product. In so doing, they are also helping the user tremendously, because convenience of handling, the lighter shipping weight, and labor and space saving advantages of solid fibre containers are unquestionable to him.

Another hurdle that must be presented to the user is the higher cost of the weatherproof solid fibre container. The resinous type adhesives, the long-fibred pulp required for the plies as well as other factors add considerably to the price of such containers. In comparison with wood boxes for export, however, these additional costs can be compared most favorably. The scarcity of wood containers also makes solid fibre the only solution in these difficult times.

Another problem that needs study is the weakness of the cases at the corners and on the edges where the board must be scored and seamed in order to be shaped. One possibility is the use of certain kinds of gummed tapes made with waterproof paper and a heat-sealing adhesive. Tapes other than metal have also been suggested to replace steel strapping. These have been used in some test instances in an effort to save steel, but so far have not gained wide acceptance.

Viewed realistically, the food supply of the United Nations depends upon the efficiency of these weatherproof solid fibre containers and they deserve all the attention that can be given them by every group with a possible interest in them.

Cheese—without foil—rubber

(*Continued from page 49*) large block or wheel form. The product is then cut into the desired unit sizes and given a coating of special wax by a dipping process. The wax-coated cheese is then wrapped in the printed cellophane. The so-called wet-wrap method is often utilized, with the outer or printed surface of the wrapper moistened to make it plastic and slightly tacky. The wrapper is then placed about the cheese unit and the ends are sealed. As the wrapper dries, shrinkage occurs which makes the wrap fit tightly about the cheese and form a kind of bond with the wax coating on the cheese. This forming of a bond is essential. No matter what the wrap or the kind of cheese, a bond must somehow be formed between cheese and wrap in order for the wrapper to function as a protective material.

In regard to cheese for export, still other packaging problems arise. By far the greater part of the cheese being shipped abroad under lend-lease is bulk cheese of the Cheddar types, 70 to 80 lbs. in weight. However, process cheese as well as some natural cheeses are being packaged for our armed forces and the United Nations in No. 10 lacquered tins. To date canned cheese shipments have reached many million pounds. Cans afford protection against crumbling, drying or mold, great resistance to changes in temperatures, low and high humidity, and cans are tough and moisture-proof. The valve-type tin also permits the aging of natural cheese in the container itself. Because of the dependability of the can as a packaging medium, the government has specified its use, in some cases, for cheese for the armed forces and lend-lease.

For shipment of cheese in bulk for these purposes—and these shipments have reached great volume—special requirements of export shipping have prompted some changes in the shipping containers used. In October of last year, the Federal Surplus Commodities Corp., together with some of the major cheese makers, worked out specifications for shipping containers to be employed for bulk cheese exported under lend-lease. Strength and utility were the principal considerations. The volume of cheese being exported also raised the question of manufacturing capacity for these containers. Today, round, hexagonal and square wooden cases and round fibreboard containers are used to ship bulk cheese abroad. Metal straps and wire are used to reinforce several types of wooden cases. In a recent revision of U. S. Department of Agriculture specifications, several old-type containers, including certain wood and fibreboard ones, have been eliminated and new types added, such as the fibreboard cheese drum which must pass tests for water-proofness. The variety of shipping containers now permissible allows their production to be spread among different factories equipped to make various types of cases and has helped to offset limited manufacturing capacity.

Although many problems involved in cheese packaging and shipping have been solved and are being solved, many yet remain with no successful solution. Materials manufacturers are continuously searching for new materials and working to develop replacements and substitutes for the pre-war wraps no longer obtainable. To find satisfactory substitutes for the foil wrap and those made of rubber hydrochloride sheeting is, of course, the major difficulty confronting manufacturers of cheese packaging materials. It is also pretty generally conceded that no one wrap is going to take the place of foil. Therefore, producers are attacking the problem of wraps for one type of cheese and attempting to find a successful solution for that type before proceeding to another. Research goes on constantly concerning proper packaging for all the different kinds of cheese, but efforts are being directed towards single objectives. Every food and material manufacturer is not endeavoring at one fell blow to develop wraps and containers for all cheese. Information about new developments is released slowly because producers want to be sure their products will stand up under today's exacting tests.

One company, which had for a number of years been supplying cheese makers with foil, is doing extensive research and laboratory work in developing substitutes for this material now that it may no longer be used. The company is trying to replace as quickly as possible the different wraps with which it formerly supplied the dairy and cheese industry. The one type of cheese, however, which demanded immediate attention was cream cheese. This highly perishable cheese used foil wraps almost exclusively. The company felt it could best serve the industry at large by attempting to solve first the problem of packaging this product without foil and using available non-critical materials.

Whatever wrap was developed had to fulfill seven qualifications that the National Cheese Institute found basically essential for a wrap for cheese. These qualifications are: (1) It must not impart or contribute to the development of objectionable surface flavors or odors. (2) It must be free of toxicity. (3) It should have moisture-proof qualities. (4) It should unwrap freely from cheese. (5) If for hot pack type cheese, the wrap must receive the cheese and permit cooling without destroying the original required protection. (6) It should be manufactured from available non-war materials. (7) It must print well and have good appearance.

The company developed in its laboratory a wartime substitute for foil for packing bulk cream cheese, both hot and cold pack, which is being successfully used by a majority of bulk cream cheese packers. The wrap is of parchment, laminated to a special type of cellophane, which is processed by the company in such a way that it embodies the foregoing qualifications in an effective way. (*Continued on page 106*)

AN AMERICAN INSTITUTION WORKING WITH AND FOR AMERICA

WE "SPLIT HAIRS" AT RHINELANDER

Figuratively, of course, but the simile we hope will emphasize the exacting care exercised in production procedure at the Rhinelander mills. Factually the micrometer-thin *peeling* being ground from the above pictured press roll of a paper machine will play an all important part in insuring our claims for "unfailing quality" in the protective packaging papers we produce. From the harvesting of pulpwood, its transportation to mill, processing over the paper machines, packing and shipping, a self-imposed *censorship* of inspection insures "hair-line" perfection in all Rhinelander Paper products. During our national emergency a wide variety of essential defense, commercial and industrial applications is superlatively met by Rhinelander Protective Papers.

Adolph Becker

PRESIDENT
RHINELANDER PAPER COMPANY

RHINELANDER
PROTECTIVE PACKAGING
Papers

FROM THE BEST THAT'S MADE TO THE CHEAPEST THAT'S GOOD

Genuine Greaseproof
Laminated Frozen Food Wrappings
Confectionery Papers
Cereal Wrapping Papers

Laminated Greaseproof Papers
Lard and Shortening Liners
Bakery Product Wraps
Coffee Bag Papers

Cracker Box Liners
Greaseproof Innerwraps
Glassine Papers, Plain, Colored and Embossed

Wax Laminated Glassine
Opaque Label & Bag Glassine
Packing Industry Wrappings—and Specialties to order

RHINELANDER PAPER COMPANY • MILLS AT RHINELANDER, WISCONSIN, U. S. A

Another company developed a moisture-proof printed cellophane with a protective wax-type coating which is having extensive use for 2- and 5-lb. loaves of processed cheese as well as the smaller consumer half- and quarter-pound units. This same company has in laboratory a wrap which is made to look like foil. It is cellophane with a special coating with another wax coating imposed on that. It is being developed as a wrap for the small triangular shape Camembert cheese and the like.

Still another company is working on a wrap with a sulfite paper base which is intended to take the place of foil for cream and certain natural cheeses. Many new developments are still jottings in the laboratory technicians' notebooks. Until new wrappings and containers have run successfully the gamut of tests in the field as well as those of the laboratory, their producers rightly feel that news about them would be premature.

Credit: Acknowledgment is made to the following for aid in collecting data on materials: Reynolds Metals Co., General Felt Products, Inc., Riegel Paper Corp. and Carl Von Ehrn.

Fibre cans that hold oil

(*Continued from page 53*) operation of filling stations by women. A case of 24 cans would ordinarily weigh 50 to 60 lbs., whereas the carton of 12 in the new paper can weighs only 27 lbs.

The new fibre cans represent a 10 per cent reduction in weight over the cans previously used and thus permit more to be shipped per freight carload. This fact not only releases tank cars and steel drums, but will also eliminate the need of costly reshipments of empty containers. The fibre cans provide a means for continuing the distribution of small-sized easily disposable consumer units for motor oil, which would otherwise be impossible with the government's present restrictions on the use of metal for such purposes.

Tops and bottons are sealed on with one of the adhesives. They may be easily opened with an ordinary pocket knife or other moderately sharp instrument. Proper opening provides a convenient pouring spout for the application of the oil.

Although the initial production of these new cans will be for motor oil, the developers foresee their eventual use in bringing to American homes such products as beer, beans and soup. The developers even believe that it may be possible to use this particular container for hot process soups, although this has not yet been proved.

Credit: Fibre can bodies by R. C. Can Co. and Gates Paper Co., Ltd. Labels by Stecher-Traung Lithograph Corp.

Color harmony

(*Continued from page 55*) application this device of having the color chips glossy on one side and dull on the other, will doubtless prove very helpful. These color chips are mechanically very durable and easy to handle. They may, of course, be removed for color matching or harmonization and after returned to their proper position in the book-chart. The volumes are sturdily bound in linen and provided with a carrying case also linen bound.

The "Color Harmony Index" is an ingenious mechanical device. Six hundred and eighty colors are instantly available at the press of a button, for comparison, matching or harmonization. The color chips, like those of the "Color Harmony Manual" are removable and replaceable as well as dull on one side and shiny on the other. The case or cabinet in use is all plastic, 28 in. long, with convenient indicators for the various colors, all arranged in such a manner that the exact complements are adjacent. The entire device, the observer concludes, is a marvel of convenience.

The layman who dabbles in color theories quickly gets in beyond his depth. He flounders around in what seems to him like excessive verbosity and hairline distinctions. What he is really after is a quick, convenient and practical method of matching colors for everyday use. These two new developments appear to provide just that, enabling him to leave the scientific discussions to the scientists.

"Color Harmony Manual," in 13 volumes by Egbert Jacobson, is published by, and the "Color Harmony Index," 680 measured colors, complete with work charts and carrying case, is manufactured by Color Laboratories Division, Container Corp. of America.

Elsewhere in this issue will be found the "Specifications and Description of Color," recently adopted by the American Standards Assn. Though there may be ground for differences of opinion regarding color theory, the current trend is gratifyingly in the direction of accuracy of definition. The practical user of color will welcome all steps that help to clarify the situation.

Speedway for cartridge

(*Continued from page 85*) proach in their conveyor and with a forward and lifting motion slides the required number of cartridges into their container. The attendant deposits the loaded carton on another conveyor which feeds directly to the full automatic labeling machine.

The feed packing is accomplished at the approximate speed of 15 cartons a minute, which means, when 20 are in each container, that the packing is done at the rate of 300 rounds per minute. When a series of cartridge packing units are used, they serve to keep the labeling machines going at capacity. Simple as the operation is, there were factors to be considered, especially in the hodge-podge feeding from scrambled cartridges, which called for special experience by the manufacturer's engineers in the handling of small and weighty items to be packaged. The technique of handling this problem is important to the packaging field at large because it also offers a solution for the method of packaging similarly shaped items such as ampoules, capsules, etc., many of which are required for Army purposes.

With the increased difficulty of apportioning manual jobs among available and diminishing ranks of labor, every operation which can be accomplished mechanically, especially at a measurable saving in cost, means just so much more labor for producing other needed munitions.

This method of packaging may be used by the drug field, aside from the packing of ampoules and capsules. Vials, which are often used for products intended for the Army, Navy or Medical Corps, might be handled on an almost identical machine, if, in the process of filling, sealing and inspection, they become disarranged and out of their normal positions in conveyor lines.

Credit: Labeling machine and cartridge cartoning feeder by New Jersey Machine Corp.

TOMORROW this chap will be a man with his own family—prospects for your product. Life moves that rapidly. Today, Heekin factories are busy doing their part to win this war. Tomorrow, they will be busy serving you. Our batteries of high speed color presses are available for faster work—faster delivery—on metal packages needed by our Government and our men in service. If you have such a product, we can serve you. The quicker this war is won, the earlier Tomorrow comes to your business. In the meantime—Look Ahead.

THE HEEKIN CAN CO., CINCINNATI, OHIO

HEEKIN CANS

Lithographed

WITH HARMONIZED COLORS

Farm-fresh foods

(*Continued from page 83*) given two or more washings and gradings before moving along again for a final inspection. This last inspection is done by hand by experienced workers who remove any vegetable that appears in the least inferior to the standard set for the particular food.

Now that the vegetables have been given a last inspection, they are ready for packing. Peas and lima beans are packed in their containers automatically by filling machines, but all other vegetables are packed by hand. These two vegetables continue on from the last inspection by conveyor to the place where they drop down into a series of stainless steel, sterilized buckets. As the buckets are filled they travel downstairs to the filling machines by means of the continuous conveyor chain to which they are attached. The peas or beans are dumped from the buckets into the hoppers of the filling machines, from which filled cartons pass on to be weighed.

All packages are weighed after being packed, whether the packing be done by hand or by filling machine. Conveyors take the filled cartons to the weighers who mark the exact weight on the carton, or add or extract contents to obtain the required weight. Both hand-packed and machine-packed vegetables move along from operation to operation on a continuous conveyor system. As each rectangular carton is packed and the top closed by a worker the packages travel on to the wrapping machines which wrap each carton in waxed paper and heat-seal the ends.

Containers used for the packing of these vegetables are cellophane lined cartons. They differ somewhat from those found in packaging other food products in that the materials are moisture-vapor-proof for protection from the dehydrating effect of the dry atmosphere of the zero-degree storage rooms. The packages themselves are designed to be very economical of space because of the comparatively high cost of zero-degree storage and the great necessity for conserving as much space as possible. Carton blanks are treated with paraffin wax for moisture-vapor protection and the waxed paper wrap for the package affords further protective qualities.

Birds Eye has carton forming machines which set up the container for filling. Paper cartons come to the plant as blanks and the sheets of cellophane to be used as liners come cut to the desired sizes. The cellophane sheet and the blank are placed together and then fed into the forming machine, from which the lined carton emerges. Thus, the carton is completely formed and lined, ready to be filled when it comes out on the production line.

When the vegetables have been packed and the outer waxed paper wrap applied, the packages are fitted into trays, ready to be quick-frozen. The freezer used by Birds Eye consists of a cabinet equipped with refrigerated metal plates, placed one above the other in such a manner that they can be moved apart to receive packaged products between them and then closed upon the packages with the required degree of evenly distributed pressure. Packages of varying thickness may be frozen at the same time between different sets of plates.

Before the machine is filled with the packages, the plates are cooled until they begin to frost. When filled, pressure is applied to the stack of alternate layers of packages and refrigerated plates so that at both top and bottom the packages are under pressure contact with a refrigerated plate. The freezing time varies with the thickness of the package as well as the kind of product. This variation in time is from one to three hours for the vegetables and other foods.

Since with the method used by Birds Eye, products had to be packaged before the freezing between refrigerated plates, a package with some flexibility was necessary. It was also desirable that it be as thin as practicable so that the contents would freeze rapidly and uniformly. The present Birds Eye rectangular, comparatively thin, waxed paperboard carton was adopted because it best met these conditions in the opinion of the company. A uniform "four-servings" retail package is used, but cartons for the institutional trade have a fixed length and width with a varying thickness to accommodate net weights of products of varying densities. The greater part of the company's institutional pack is in the $2^1/_2$-lb. carton. Resembling a book in shape, the consumer package of Birds Eye food may be carried home conveniently, opened, contents removed and the empty paper carton disposed of easily.

As the quick-frozen vegetables in their cellophane lined, waxed wrap carton leave the freezing cabinets, they are packed by hand in corrugated shipping containers. These are transported by refrigerated truck or railroad cars to the various warehouses located in many sections of the country or direct to wholesale distributors' warehouses.

Credit: Carton forming machines by Peters Machinery Co. Filling machines by Ayars Machine Co. Wrapping machines by Johnson Automatic Sealer Co., Ltd.

Paint for—amateurs

(*Continued from page 65*) search for substitutes that can be used to save vital materials. It also believes it is good business to give detailed instructions on labels and cartons regarding the use of its interesting new paint, Kem-Tone.

The product can label follows the design used in all its latest advertising—a paint brush motif with the brush filled with yellow paint leaving a bright, yellow trail over wallpaper, painted walls, plywood walls, wallboards, fireplaces, brick interiors and basement walls.

Immediately following this Sherwin-Williams "signature," as it might be called, are the instructions on preparation of the surface for painting; mixing and applying the paint; and what to do after application. There is a final bit of advice on what to do if the paint freezes—"Restore to room temperature before using."

The newly designed Kem-Tone color card promotional piece also follows the general design and sales talk used on the label. Its color samples are more generous than those on the design previously used and the new yellow color is more arresting than the pastel green, white and orange of the folder that Sherwin-Williams had formerly.

Other materials which help dealers to make ready sales with the new product are free display pieces for them to use in windows and on counters. These small posters carry illustrations on the use of the border trims and the Roller-Koater. Thus the company integrates its whole line of paint and accessories for the amateur who wants to freshen up his walls at home. These displays help the retailer to point up the entire line with allied units.

If cartons, labels, displays and advertising make a market, Kem-Tone from now on will be flying under its own power without benefit of the power behind the name of the paint company that "covers the world." Sherwin-Williams executives seem to feel that the product and the packaging have plenty of power of their own to do the job.

PACKAGING
MAILING
MATERIALS HANDLING

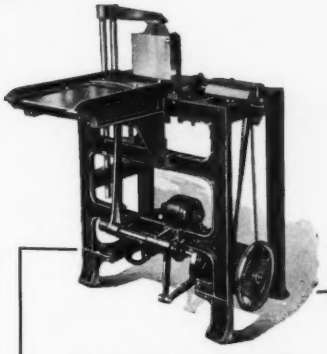
THE SUPREME EFFICIENCY OF THE METAL EDGE METHOD IS MAKING A TREMENDOUS CONTRIBUTION TODAY: WILL CONTINUE TO PAY BIG DIVIDENDS TOMORROW. LET US GIVE YOU THE FACTS, NOW.

METAL EDGE

NATIONAL METAL EDGE BOX COMPANY
334 NORTH 12th STREET
PHILADELPHIA, PA.

Pulmosan formerly used metal containers . . . now trim, good-looking Metal Edge boxes give required strength, while the Metal Edge *packaging method* releases valuable floor space.

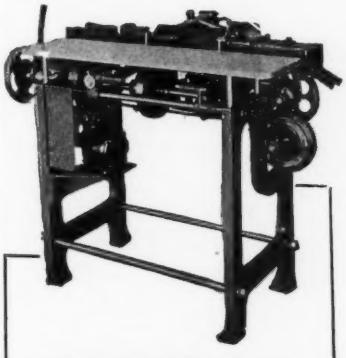
Machines to Package Food Products for the Armed Forces



This PETERS JUNIOR CARTON FORMING and LINING MACHINE sets up 35-40 cartons per minute, requiring one operator. After the cartons are set up, they drop onto the conveyor belt where they are carried to be filled. Can be made adjustable for several carton sizes.

Today production is paramount and today these Peters Machines are being used to package lard, shortening, biscuits, crackers and other food products for our men in Service.

With the proper priority we can equip your plant to speed up production and lower your cost.

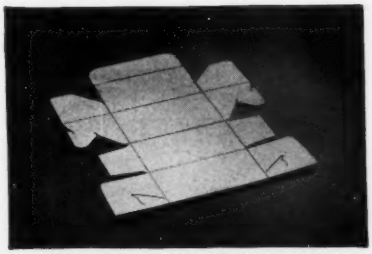


This PETERS JUNIOR CARTON FOLDING AND CLOSING MACHINE automatically closes 35-40 cartons per minute, requiring no operator. After the cartons are filled, they enter this machine on conveyor belt as open cartons and leave the machine completely closed. Can be made adjustable for several carton sizes.

Send us a sample of each size carton you desire to handle and we will promptly recommend and quote on machines to meet your specific requirements.

Advice to Present Users

Inspect your machines regularly and keep them operating at maximum efficiency. Periodic oiling is good insurance for best operation. If any new parts are required to keep these machines running, do not hesitate to communicate with us.



Type of die carton handled on machines

PETERS MACHINERY COMPANY
GENERAL OFFICE AND FACTORY
4700 RAVENSWOOD AVENUE, CHICAGO, ILL.

IF you want a boxboard that says "STOP and take notice," specify Mac Sim Bar. There are 36 years' experience behind this quality product.

★ ★ ★ ★

WE DO NOT MAKE BOXES, CARTONS OR CONTAINERS, BUT WE DO MAKE QUALITY BOXBOARD

MAC SIM BAR Paper Company

OTSEGO, MICHIGAN
PHONE KALAMAZOO 5500

CHICAGO, 228 N. LaSALLE
PHONE CENTRAL 1798

Bail-out ration

(*Continued from page 66*) must "bail out" that the new ration fulfills its mission. In this case the soldiers and pilots don't have much time to search about the plane for the bulkier K Rations. On the other hand, their emergency food needs will be taken care of if they simply carry in their pockets a couple of "bail-out" rations during the entire air journey.

The new ration has been tested thoroughly by Air Corps Task Forces overseas. The 2-oz. chocolate bar is a tiny edition of the Army's famous D Ration or Logan bar. It will not melt or run out of its wrapper and will stand up under temperatures from 20 deg. below zero to 120 deg. F.

Argo—safety record

(*Continued from page 90*) composed of a representative from each of the plant's 60 departments, attend regular monthly meetings, present complaints and suggestions and arrange to have something done about them all. Employees are proud of appointment to this committee. Badges are issued to members and each becomes the official liaison man between his department foreman and the safety department's office.

4. When an accident does occur, copies of a report on it go from the First Aid department to the plant superintendent, the division superintendent, the foreman of the department in which it occurred and to the safety director. Each of these officials shares responsibility for investigating the cause and cooperates to insure against a similar recurrence.

Mimeographed copies of the report of a lost-time accident, with cause and responsibility assigned, are distributed to all supervisors in the company and appear on every shop bulletin board in all four of the company's plants. The aim, as well as the result, is to get the voluntary cooperation of every employee. No rewards are issued for lengthy individual safety records. No reprisals are taken because of an accident.

An inter-plant safety contest has been in operation since 1919. This is conducted on a yearly basis, the winning plant receiving an appropriate trophy. Under the policy of constant education, the plant safety director says, "It has been thrilling to see one man after another, one foreman after another, one department after another come around to wholehearted acceptance of organized accident prevention."

• The progress is startlingly revealed by two sets of figures: In 1919 there were 2,153 employees at Argo. In that year there were 272 lost-time accidents. In 1941 there were a few more than 2,000 employees and the year's record showed only 14 lost-time accidents. And 1942 is running better than 1941, with only six lost-timers for eight months.

Frank Hasse, general safety director for the entire Corn Products Refining system of four plants scattered throughout the country, philosophizes about accident prevention work in this way: "The remarkable reduction in accident experience since the inauguration of the safety program is attributed solely to the splendid cooperation received from every foreman and employee in the plant."

His thoughts echo those of scores of safety directors to the effect that, "It is tremendously important to maintain the physical plant and equipment in the safest way possible, but accidents will occur in any plant where employees and supervisors are not convinced that a safe worker is the best safety device in the world."

If you're switching to paper

LOOK *at mass-produced set-ups*

● There is no substitute for the set-up box for strength in a paper package. We offer the additional advantages of speed production and economy. Our set-up boxes are produced in quantity, automatically, from the smallest size.

We manufacture containers of all the new coated and laminated protective moistureproof, oilproof, greaseproof papers and boards.

We can help you with your replacement packaging problem.

IMPERIAL **PAPER BOX CORP.**
252 NEWPORT ST. BROOKLYN, NY.

Set Up for Bottom Stitching

BLISS TOP and BOTTOM STITCHER

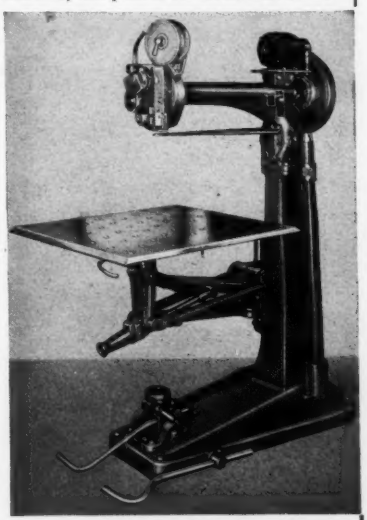
Containers with both tops and bottoms wire stitched are now specified for packing numerous products.

This combination BLISS TOP and BOTTOM STITCHER is recommended for plants whose production does not warrant installation of separate Bottom and Top Stitchers. For assembling cases by bottom stitching, the blade anvil is dropped down against the pedestal and the table is swung to one side as illustrated at left; the post is placed in a socket on the base and locked in position.

After the desired number of containers has been bottom stitched, the post is removed and table and blade anvil swung into position as illustrated at right, for top stitching the filled containers. Less than one minute is required to make the change.

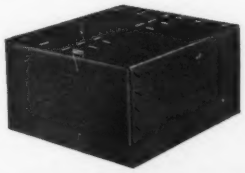
The work table is fitted with ball bearings on which the box may be easily moved in any direction. The table is counter-balanced and is quickly and easily adjustable up or down by hand for boxes of varying heights.

Built in two sizes with 15″ and 25″ throats, and 26″ x 30″ work table. Handles boxes up to 25″ in depth. The standard Heavy Duty Stitcher Head is used. Motor 1/4 HP.



Set Up for Top Stitching

Wire stitching both top and bottom provides a uniformly secure closure and gives added strength and rigidly to the case.

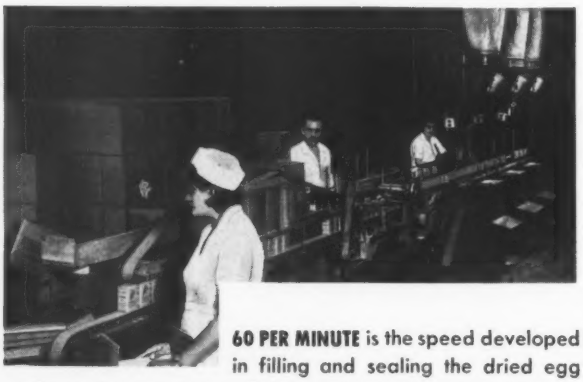


Write for further information

DEXTER FOLDER COMPANY
330 West 42nd Street New York, N. Y.
Chicago • Boston • Philadelphia • Cincinnati

Need help
in packaging
a dehydrated food?

MANY OF THE FINEST PACKAGES developed for all types of dehydrated foods have grown out of the close collaboration of Stokes & Smith with some of the Country's largest packers. And, if you're entering this field, you'll find that we have done much of your basic work for you . . . can show you many a short-cut to your goal of *speedy economical packaging, in packages that really protect!*



60 PER MINUTE is the speed developed in filling and sealing the dried egg package shown, using an S & S packaging line based on the S & S Neverstop Automatic Carton Feeding and Sealing Machine and three S & S Universal Fillers. This installation is a good example of the speed and economy with which dehydrated foods can be handled — and there's an S & S packaging line to handle them all!

ask S&S
STOKES & SMITH Co
PACKAGING MACHINERY
FRANKFORD, PHILA., U. S. A.

Cosmetic kits hit stride

(*Continued from page 63*) and little known, Revlon ascribes much of the success of their gift sets. No matter how unusual the design for the package may be, the company will have information about wrappings that would be suitable as a covering for it.

This information is gathered by one young women who spends all her time shopping the fabric market. As she shops she makes notes on price, quality, etc., obtains swatches and adds her own comments about the fabric. The data are then filed for future reference in the Revlon offices. Thus, at any time, Revlon is able to select from a group of available materials the one most suitable for a particular kit. One of the specialties of the Revlon line is the case made of genuine leather. Although this year leather is available in limited quantities only, the firm has created a few designs using leather for their more luxurious cases. However, the amount used has been cut down considerably by clever designing. Linings of rayon are matched to the leather cover in such a way that the appearance of the case when closed is that of an all-leather one.

New clasps and fasteners of metal are no longer obtainable, so many of the leather cases which formerly would have used metal are fastened with straps and pulls of self material. Another kit, of cotton, rayon and a paper carton, has a clasp made of a tiny piece of scrap metal and a bit of rayon ribbon. This original clasp was the invention of the manufacturer of the case who came directly up against the stonewall of no metal clasps. He didn't have any and he couldn't obtain any for the purpose. But in his shop he did have some trimmings and odds and ends of metal—not very much, but enough—and he could use them. He worked out the idea of putting a ribbon pull on the box lid and a half-circle of metal on the front edge of the base of the box and he had an excellent clasp.

In the fabric market, Revlon's young shopper found some left-over dress velvet. This was used for two cases designed to double as jewel boxes and purse carry-alls. Since no other metal was available, a medallion of silver was used as an ornament for the box and was in perfect keeping with the velvet covering.

One of the most unique fabrics used by Revlon came from the island of Madagascar long before the fall of France. It's called Madagascar shawl and is woven of straw. The material gets its name from the fact that the word "shawl" to the Malagasy, as the natives of Madagascar are called, means any woven material. The shawl is woven by hand by the natives and its former, most familiar use so far as Americans are concerned was as coverings for suitcases and trunks. Those old trunks with the enormous domed lids that became the invariable occupants of attics often had coverings of of Madagascar shawl. So, too, had the feather-weight suitcases of the days of O'Henry. When Revlon's shopper discovered the straw fabric, it was practically a drug on the market. Now, the use of this most unusual material as a covering for a domed, trunk-like box adds a touch of reality to Revlon's Hand Trousseau Trunk kit with its worldly steamship and airline stickers.

Always ready with a timely kit, Revlon introduced the small inexpensive ration case this year. One pocket holds a lipstick and two nail preparations and the other holds a ration card. The kit is small enough to fit handily into a purse. It thus serves to keep nail care items and more-and-more-frequently used ration card in a convenient place.

THIS is more than a war of mechanical monsters clashing in the night . . . more than a war of production.

It is a war for markets—*your* markets! The Axis wants your business—wants to destroy it once and for all.

With so much at stake, there is no doubt you will want to do everything you can to meet this Axis threat. Two ways are open: Speed production and put 10 percent of your income into WAR BONDS! The only answer to enemy tanks and planes is *more* American tanks and planes—and your regular, month-by-month purchases of War Bonds will help supply them. Buy now *and keep buying*.

THE GOAL: 10% OF EVERYONE'S INCOME IN WAR BONDS

When you install the Pay-Roll War Savings Plan (approved by organized labor), you not only perform a service for your country but for your *employees*. Simple to install, the Plan provides for regular purchases of War Bonds through voluntary pay-roll allotments.

Write for details *today!* Treasury Department, Section R, 709 12th St. NW., Washington, D. C.

EVERYBODY EVERY PAYDAY 10%

War Savings Bonds

This space is a contribution to Winning the War by

MODERN PACKAGING

LOCKED IN LUSTEROID FOR SAFETY, SMARTNESS, SAVINGS AND SALES

- In action, LUSTEROID savings speak louder than words. From start to finish, these distinctive ultra-modern plastic vials and tubes spell economy for users.
- **LUSTEROID** saves weight and material without sacrifice of strength and rigidity. It will not break or become brittle with age.
- **LUSTEROID** saves work. No protective partitioning or special packing required. No labels to affix—the design and sales message are reproduced in color as an integral part of the container.
- **LUSTEROID** saves shipping costs through its lighter weight and simplified packing requirements.
- With savings like these, LUSTEROID points the way to practical economies for your future packaging requirements. Remember, LUSTEROID vials and tubes are made in all colors—transparent or opaque—with cork, slip-on or screw-cap closures in standard diameters from ¼ to 1¼ inches and lengths up to 6 inches.

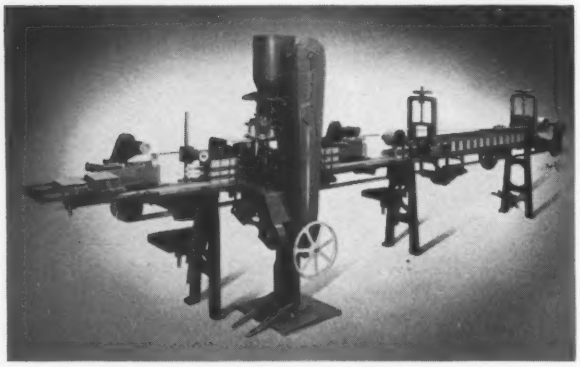
Write for full details today

LUSTEROID CONTAINER CO., INC.

Formerly Lusteroid Division of of Sillcocks-Miller Company

10 Parker Avenue, West • South Orange, New Jersey

FOR DEHYDRATED FOODS



A FAST, FLEXIBLE
FILLING and SEALING UNIT!

The Triangle Model SPA Filler and SA Carton Sealer illustrated provide an ideal combination for rapid, low cost packaging of a broad range of dehydrated food products.

This is just one of a complete line of machines—Fillers, Weighers and Carton Sealers—to meet the rapidly increasing packaging requirements of the dehydrated food industry. If you are producing, or about to produce, dehydrated foods, you will save time, trouble and money by putting the packaging problem up to experienced Triangle engineers. They will help you swing into full scale production in a hurry. Write today, outlining your requirements.

TO ALL FOOD PRODUCERS: Triangle delivery is reasonably prompt on all orders carrying an A-1-J or better rating. If you cannot get preference ratings, inquire today about Triangle VICTORY MODEL Packaging Machines, low priced units which are available without priority as long as supply of material lasts.

TRIANGLE PACKAGE MACHINERY CO.
90 NO. SPAULDING AVENUE, CHICAGO
BRANCHES IN PRINCIPAL CITIES

Merchandising show

(*Continued from page 75*) buy. For, if the desire is aroused and the retailer tells the consumer he is just out of the product, there is bound to be a let-down feeling in the prospective buyer. On the other hand, the manufacturer cannot afford to ignore the consumer whether the product is buyable or not. He certainly cannot ignore the consumer if he wants to stay in business after the war is over. Staging a comeback is always very costly and sometimes it is impossible to stage it at all. The memory of the consuming public is remarkably short. It is usually a case of out of sight, out of mind.

Any retailer knows that nothing takes the place of a ready-sold consumer. That being so, every manufacturer should make a special study of window and floor displays, keeping in mind both the consumer and retailer. In these days of fewer calls from manufacturers' salesmen, a well-thought-out display in the dealer's hands is proof that a particular manufacturer intends to stay in business. The dealer should be given helps that really help—something that will stand out among the hodge-podge of pieces that serve no other purpose than merely to remind. In the merchandising parade it is important to be a drum major, not just one of the piccolo players. Sell the dealer; sell the consumer; and, above all sell your trade mark. Right now displays must keep alive trade names and brands and it is up to manufacturers to create displays that can do these things. Now is the time to take advantage of the fellow with the attitude that the whole world is going to the dogs anyway and he might as well let it go. The manufacturer who accepts the challenge which this war presents to his business and in spite of conditions keeps his firm and his product before the public can go a long way toward assuring himself of a post-war position in economic life. Manufacturers like Whitman Candy, Gillette, Phoenix Hosiery, Sunkist, Regal Shoe, among many others, went through World War I and throughout that entire period did not let the public forget them. When the war was over, their places in the business world were resumed as a matter of course. Examples like these should serve to keep today's business men alert to the advantages of never being forgotten.

Credit: Photographs used in this article, courtesy of Oberly & Newell Lithograph Corp.

Can label identity

(*Continued from page 69*) comparison with the very narrow strip label used by many glass packers to give visibility to the product. Larsen believes the wide label affords the packer the space and opportunity to retain the accepted characteristics of his regular can label and further permits space on which to do a merchandising job by means of the recipes on the backs of the labels. There are ten different recipe labels. The Veg-All brand is pictured on one side and is the same on all. The pictures on the back of each label with the recipes are all different. A collating method is devised so that the labels can run through on the company's regular labeling equipment.

Credit: Labels by United States Printing & Lithograph Co.

Form-Fit, HERMETIC *Overseal*

This new invention is a triple-function secondary closure. It locks primary closures of metal, plastic and paper to bottles, jars, jugs of pottery and glass.

Hermetically seals every part and crevice of your closure.

1. Moisture-proof
2. Tamper-proof
3. Label-seal for drugs, pharmaceuticals, foods, wines, liquors, beer, etc.

It is easy to apply—self-sealing.

Requires no machinery.

Immediately available to all industries.

AMPLY-AVAILABLE EPPY *Seals*

Comes in GOLD, SILVER, TRANSPARENT&COLORS.

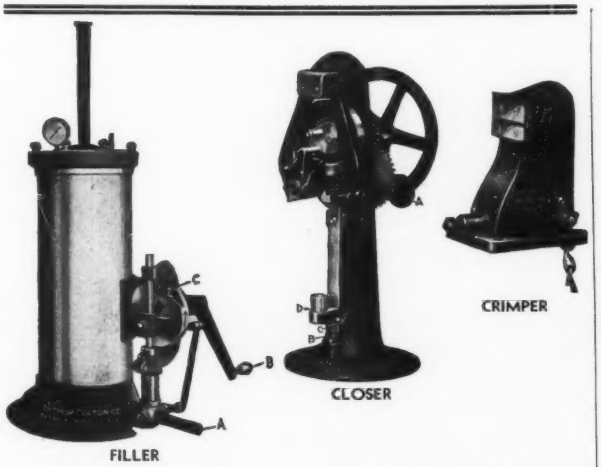
Can be imprinted with trade-mark, slogan or design.

Replaces cellulose bands; replaces foil closures.

If you have a closure problem try Eppy Seals.

"EPPY SEALS" will do your job.
Send for samples.

SAMUEL EPPY, INC.
333 HUDSON STREET NEW YORK CITY



COLTON Hand Operated Machines

Will seal tubes with Colton Clipless Closure or for applying clips
Will be pleased to recommend machines suited for your requirements
write

ARTHUR COLTON CO.
2602 EAST JEFFERSON AVE., DETROIT, MICH.

HAVING LABELING TROUBLE ON SUBSTITUTE PACKAGES?

Amazing Kum-Kleen solves the problem for it sticks where others fail

This dry label adheres to varnished surfaces glass, plastic, cellophane, wood, metal

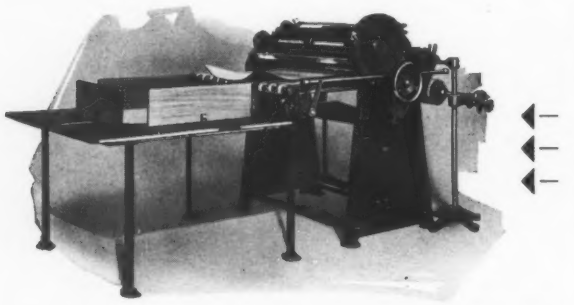
Here is an entirely different type of label for it is quickly applied without moistening, adheres permanently to any smooth non-porous surface, is easily peeled off when necessary, never pops off even under intensive heat, cold or climatic changes—and it pays for itself many times over in application savings alone!

Write today for the complete story of dry labeling, learn what it has done for others—and can do for you!

Kum-Kleen LABELS

AVERY ADHESIVES • 451 E. 3rd St., Dept. EN-10 Los Angeles Calif.

In These Trying Days of
"SHORTAGE *of* HANDS"



The Beck Sheeter

will release hands for other work, because thru its great simplicity, it needs very little of the operators' attention, once it is set. Especially when equipped with **ELECTRIC EYE CONTROL** are you freed from human element in your sheeting work. Amazing degrees of accuracy in "spot sheeting" work, plus profitably increased outputs. The need for doing your own sheeting is probably more acute now than ever before in your business history, and this because of present conditions.

CHARLES BECK MACHINE CO.
13th & Callowhill Streets Philadelphia, Pa.

SPECIALISTS IN SMALL PAPER BOXES
ESTABLISHED IN 1832
RPBCo
Time Tested...
Grease Impervious Paper Boxes
for
those who use small metal and glass containers for packing Petrolatum and other greasy substances—
write for samples...
RANDOLPH PAPER BOX CO.
RICHMOND, VIRGINIA
SPECIALISTS IN SMALL PAPER BOXES

Displays—frozen market

(*Continued from page 78*) identifies his business with the war effort for the reflection of public good will. The program also accomplishes a most important result for both the Zenith dealer and Zenith. The dealer's name and Zenith's continue to be identified together and it becomes the joint responsibility of maker and distributor to keep this name association before the public. By pulling together in this way, Zenith and its dealers stand every chance of conducting a campaign that will be far-reaching in its implications in keeping the name alive, in building morale and confidence in this country's all-out war effort and in retaining recognition and public good will during trying post-war times.

Zenith furnishes its dealers with a variety of display material and makes three concrete suggestions about the best use of it. The first suggestion is that for what the company calls an "all-out store" display. The dealer is told how he can make his store a colorful victory pageant by doing a complete Zenith window and displaying throughout his store posters, streamers and miniatures building up to an interior display of Zenith radios to match the window. An all-out display of this kind can create store traffic. Second, is a suggestion for window treatment. For this, Zenith furnishes a complete display kit. The dealer is told how to arrange Zenith radios in the window where they are identified with victory shield cards. Streamers are to be placed high on the window or in the background, with posters set up either as background or scattered about. Miniatures may then be applied either directly to the window or set up just inside the window where the copy may be read. Third, comes the description for an interior display for the store's radio section. The dealer is advised to model his interior display after the one in his window and to make the most of the repetition value. Miniatures may be placed on doors, columns and wherever posting space presents itself. Posters may be used on columns and other space, including the regular store bulletin space. And streamers may be hung from balconies or swung with suitable mounting.

At the end of these suggestions to dealers, Zenith points out that the company has given them the tools in order that they may be identified in this national program as partners of Zenith and their government.

Credit: Displays made by Niagara Lithograph Co.

Industrial "concentration"

(*Continued from page 68*) 10 per cent of shops engaged in non-food trades had already been closed. Many more are carrying on at a loss, trying to maintain their identity until after the war. It is felt that there is considerable wastage in the existing system.

The government appointed a committee in May 1941 to examine the problem and it reported that "present conditions may almost of necessity involve the withdrawal of a proportion of existing traders." Voluntary concentration has not been achieved to any appreciable extent and in its latest report the committee has suggested that it may be necessary to put forward a compulsory plan in which traders who carry on pay a levy for the compensation of those who withdraw for the duration of the war. Naturally a plan of this sweeping character will not be accepted easily, yet some concentration plan will have to be devised for retail trade to meet the increasing demands made by war conditions.

Classified Advertisements

All classified advertisements payable in advance of publication. Rates: $5.00 up to sixty words; enclosed in border, $10.00 per inch. Publisher reserves the right to accept, reject or censor all classified copy.

SALESMAN—WAR ESSENTIAL PACKING: To sell lithographed cartons and labels for war essential products New York City and vicinity. Proof of successful sales record required. Prefer someone with contacts in food, drug or cosmetic lines. Write details previous sales results in field and minimum drawing account required if commissions are favorable. Reply Box 163, Modern Packaging.

MAN ACTING AS mill agent with twenty years sales experience in the New England market desires further line. Reply Box 162, Modern Packaging.

WHAT ARE YOU SELLING THESE DAYS?

If you need new lines to replace those lost by war production, here is a high-grade line of fine, embossed labels, seals, tags and displays still selling to vast and varied markets. We now have openings for a few top-notchers in recently vacated territories. Exclusive protection, complete sales assistance and the best line in the country.

Tell us about yourself and maybe we can get together. Reply Box 161, Modern Packaging.

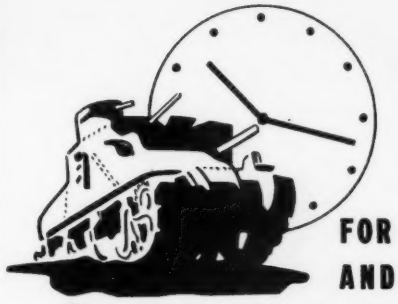
Problem Solving is our BUSINESS

With the insistent need for substitutions of non-critical for critical materials, and with new problems presented for solution almost daily, Mid-States Gummed Paper Company is expending every effort in devising such substitutes.

At Mid-States men and machines are developing such new materials as waterproof tapes, substitutes for wire and steel strapping, luminous paper, heat sealing products and special coatings for paper and cloth.

Mid-States Gummed Paper Company with their years of experience and background in working with special types of adhesives, coatings, paper, cloth and other materials, is proving an invaluable aid to many businesses these days. Manufacturers and jobbers are invited to consult with us. "Problem Solving is our Business."

MID-STATES GUMMED PAPER CO.
2515 SOUTH DAMEN AVENUE
CHICAGO, ILLINOIS



AROUND THE CLOCK FOR THE ARMY AND THE NAVY

Seven days a week—Twenty-four Hours each day, the men and machines which formerly built paper converting equipment are now engaged in producing for defense.

Our own production has been set aside until our national needs are satisfied. Some of the machines you have ordered may be among the pieces of equipment which this program will affect.

We regret that we must hold their delivery until we are again permitted to return to production for civilian needs.

In the meantime we will be glad to serve you with repairs to machines you now have, where such orders are accompanied by proper priorities.

HUDSON-SHARP
★ MACHINE CO • GREEN BAY • WIS ★

There will always be an ADHESIVE PROBLEM *UNTIL*

***You get in touch with* UNION**

Not all of the permanencies of our way of life are pleasant, like Christmas. Many of them may be extremely unpleasant. For instance, adhesive problems can be extremely annoying on gift packages or everyday packages. But then, you don't have to wait for Christmas to bring you a solution.

There is always an answer to your gluing difficulty when you come to a concern who knows most of the answers and where to find the rest. We have created several hundred formulas in nearly 4-score years. We'll be glad to do a few for you.

Established 1866
Union Paste Company
1605 HYDE PARK AVENUE • HYDE PARK, MASS.

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MODERN PACKAGING
BRESKIN PUBLISHING CORPORATION
122 East 42nd St. New York City

WORRIED ABOUT A REPLACEMENT PACKAGE?

If you are faced with the problem of replacing your present package, Michigan Cartons may be the answer. Many packers have already switched to these sturdy sales packages without sacrificing protection or product appeal. Here are a few facts . . . straight and to the point . . . but well worth remembering.

Michigan Cartons can be coated, laminated or combined with a variety of moisture resistant, greaseproof and gas repellent materials. They're built to snap through high speed packaging machines at a low unit cost. They pack snugly, save costly freight space and weight. Package designs can be easily transferred to Michigan Cartons without loss of trade identification or sales appeal. More often the clean, flat surface of boxboard prints brighter, sharper . . . actually improves package design.

Every Michigan Carton is tailor-made. No stock sizes or designs are available. This means that each product is carefully studied and, by heeding its specific requirements, the best package possible is constructed.

If you have a replacement problem, write us. If we have the answer you'll get it immediately. If not, we will dig until we solve it.

MICHIGAN CARTON CO.

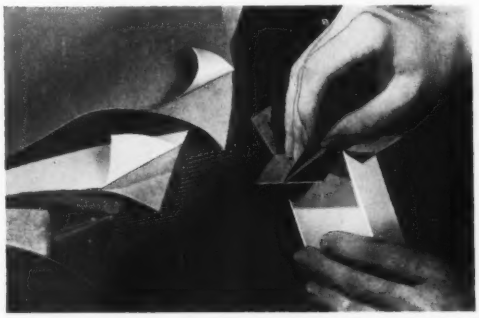
BATTLE CREEK, MICHIGAN

Manufacturers of Boxboard · Folding Cartons

Large Michigan Cartons like these are ideal for bulk packaging. Coated, laminated or combined with moisture, grease-resistant materials this type of package is being used to protect frozen and dehydrated foods. Large cartons are sturdy—save weight and critical materials.

Many dried products and dehydrated foods are successfully packed in Michigan Cartons. Highly hygroscopic products are often first packed in hermetically sealed moisture-proof bags. Other foods are adequately protected in silicated, waxed or laminated cartons, securely sealed. Absolute protection necessitates cartons custom-built for the product.

CARTONS SAVE CRITICAL MATERIALS



Michigan Cartons are made from all standard boxboard finishes plus a variety of special coatings and laminations. Experts determine the board that gives your product the maximum in protection. One boxboard and carton source eliminates the possibility of divided responsibility and costly delays.

Considering a new food package? Then you'll want to draw upon the resources of a carton organization that specializes in food packaging. Complete research and marketing facilities plus years of practical experience have made Michigan Cartons the favorites of leading food merchandisers.

Ethocel Sheeting

FITS TOUGH WAR JOBS!

WAR CONDITIONS are providing plenty of opportunities for plastic sheet materials to demonstrate their usefulness. Where the going is particularly tough ETHOCEL* Sheeting fits the requirements admirably and is favored for the job.

The protector for the worker's identification card shown here is a case in point. The card is handled several times daily. It must be protected by a tough material that can stand hard usage—hence the envelope of transparent ETHOCEL Sheeting.

Industrial users of ETHOCEL Sheeting have successfully tested its fitness for tough war jobs under temperatures as low as 70° below and as high as 250° F. They have made deep draws where depth equals the diameter and found tensile strength equal to 10,000 lbs. per sq. in.

From these and many other tests fabricators have learned that ETHOCEL Sheeting can be used successfully in difficult applications where service requirements are exceptionally severe. It is generally accepted as an effective protective medium—in War as in Peace.

*Trade Mark Reg. U. S. Pat. Off.

DOW

THE DOW CHEMICAL COMPANY
MIDLAND, MICHIGAN

New York City • St. Louis • Chicago • Houston
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